TO 00-20-5

TECHNICAL MANUAL

AEROSPACE VEHICLE/EQUIPMENT INSPECTION AND DOCUMENTATION

Prepared By: Automated Technical Order System (ATOS)

FOR QUESTIONS CONCERNING TECHNICAL CONTENT OF THIS TECHNICAL MANUAL CONTACT HQ AFMC/ENBP, WPAFB, OH.

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CHAPTER 1

GENERAL

1-1 PURPOSE.

The purpose of this Technical Order is to provide guidance to the maintenance community for the proper documentation of inspections and maintenance actions on Air Force equipment.

NOTE

In the 00-20-series TOs, the designation, GP/CC is used to represent the Logistics Group Commander, Operations Group Commander, Director of Maintenance, or Air Refueling Group Commanders, as applicable to the organizational structure of the unit. At test sites or activities which do not have a GP/CC, it will be responsibility of the Chief of Maintenance, Chief of Test Force Teams or Installation Team Chief to assure that the criteria of this TO are complied with.

1-2 SCOPE.

This technical order is applicable to all organizations maintaining Aerospace Vehicles/Equipment, AGE, support equipment, training equipment, and C-E equipment. All changes to this technical order must be forwarded through the appropriate MAJCOM.

1-3 ASSOCIATED FORMS REQUIRED BY THIS TO.

1-3.1 File and dispose of all forms in accordance with (IAW) AFI 37-138.

1-3.2 AFTO FORM 95, SIGNIFICANT HISTORICAL DATA.

1-3.3 AFTO FORM 349, MAINTENANCE DATA COLLECTION RECORD.

1-3.4 AFTO FORM 427 or 428, AIRCRAFT INTEGRAL FUEL TANK REPAIR HISTORICAL DATA.

1-3.5 AFTO FORM 781, AFORMS AIRCREW MISSION FLIGHT DATA DOCUMENT.

1-3.6 AFTO FORM 781A, MAINTENANCE DISCREPANCY AND WORK DOCUMENT.

1-3.7 AFTO FORM 781B, COMMUNICATIONS SECURITY EQUIPMENT RECORD.

1-3.8 AFTO FORM 781C, AVIONICS CONFIGURATION AND LOAD STATUS DOCUMENT.

1-3.9 AFTO FORM 781D, CALENDAR AND HOURLY ITEM INSPECTION DOCUMENT.

1-3.10 AFTO FORM 781E, ACCESSORY REPLACEMENT DOCUMENT.

1-3.11 AFTO FORM 781F, AEROSPACE VEHICLE FLIGHT REPORT AND MAINTENANCE DOCUMENT.

1-3.12 AFTO FORM 781G, GENERAL MISSION CLASSIFICATIONS-MISSION SYMBOLS.

1-3.13 AFTO FORM 781H, AEROSPACE VEHICLE STATUS AND MAINTENANCE DOCUMENT.

1-3.14 AFTO FORM 781J, AEROSPACE VEHICLE-ENGINE FLIGHT DOCUMENT.

1-3.15 AFTO FORM 781K, AEROSPACE VEHICLE INSPECTION, ENGINE DATA, CALENDAR ITEM INSPECTION, AND DELAYED DISCREPANCY DOCUMENT.

1-3.16 AFTO FORM 781M, STATUS SYMBOLS AND FUNCTIONAL SYSTEM CODES.

1-3.17 AFTO FORM 781N, J-79 ENGINE RUNUP RECORD.

1-3.18 AFTO FORM 781P, SUPPORT GENERAL DOCUMENTATION RECORD.

1-3.19 DD FORM 1896, DOD JET FUEL IDENTAPLATE.

1-3.20 DD FORM 2026, OIL ANALYSIS RECORD.

1-3.21 AFTO FORM 244, INDUSTRIAL/SUPPORT EQUIPMENT RECORD.

1-3.22 AFTO FORM 245, INDUSTRIAL/SUPPORT EQUIPMENT RECORD.

1-4 FORMS OVERPRINT.

AFI 37-160 authorizes local overprint of forms prescribed in this TO.

1-5 AUTOMATED FORMS.

When automated maintenance management systems (i.e. CAMS or G081) are utilized, the automated forms module will be used. As a minimum, AFTO Forms 781A, 781J, 781K, and 95 generated by the applicable automated maintenance management system will constitute fully automated aircraft/equipment forms. Other automated maintenance management systems (i.e., PCAMS for the Nondestructive Inspection career field) or like systems may be used for process controls and/or AFTO Form 244 documentation tracking with specific written approval from the responsible MAJCOM Functional Manager. Manual forms produced by a computer program such as PerForm or JetForm do not meet the intent of the automated forms module.

1-6 STANDARD ENTRIES.

1-6.1 Manually record all dates on the forms prescribed in the 00-20-series Technical Orders by eight digits in the order of year, month, and day. Example: YYYYMMDD, 20001208 for 8 Dec. 2000. Approved automated forms in information systems may deviate from this procedure based upon system standards. Handwritten formats may follow the format of the automated system.

1-6.2 Abbreviations may be used for any word or term frequently used in making entries on documents.

1-6.3 Manual forms entries require a minimum signature for maintenance personnel certifying entries on forms governed by this TO. The minimum signature for maintenance document purposes required by the 00-20-series technical orders consisting of the written first name initial, last name, and employee number or equivalent/FAA certification number. Contractors may use a production stamp in place of the employee number. Contractors will use their FAA certification number. Electronic signatures may be used in lieu of the above requirements. Minimum signature for aircrews will be first name initial, last name with the employee number block being a MAJCOM option. Exceptions to this are identified in appropriate TOs.

1-7 SYMBOLS AND THEIR USE.

TO 00-20-1 defines and establishes use of symbols described in this TO for use on maintenance documents to make important notations instantly apparent. They reflect the mechanical condition, fitness for flight or operation, servicing, inspection, and maintenance status of the weapon system or support system. The use of these symbols must be fully understood in order to make proper entries on maintenance documents.

1-8 INFORMATIONAL NOTES.

Informational notes are informative in nature and do not affect the safety or reliability of the aircraft, therefore these entries do not require symbols, when discovered codes or job control numbers. For each entry, write the words "INFO NOTE" in the "DISCREPANCY" block of the AFTO FORM 781A followed by the applicable information. When the information is no longer valid, clear the informational note by lining through the invalid information. When using informational notes to annotate munitions types and quantities loaded, annotate multiple entries in the same discrepancy block i.e. impulse carts installed, chaff and flare loaded, ammo installed. When any of the information becomes invalid, line through the invalid information only. When using automated forms, the automated system will assign an event ID number.

1-9 FUEL AND OIL DOCUMENTS.

1-9.1 Each USAF aircraft, including AFRC and ANG, will carry a DD FORM 1896, "Jet Fuel Identaplate," for presentation to refueling personnel before fuel servicing can begin. The owning organization ensures the aircraft has a valid identaplate on board. Maintenance and fuels personnel share responsibility for ensuring the identaplate are returned to a specified location on the aircraft after refueling.

1-9.2 If not previously determined, the GP/CC selects a suitable location aboard each type aircraft assigned for storing the Identaplate. Once the location has been established, all aircraft will carry the Identaplate in the same location. Stencil the location of the Identaplate on the left side of the fuselage below the aircraft identification data.

1-9.3 When the aircraft requires re/defueling, the aircraft re/defueling supervisor will retrieve the identaplate from the designated location and present it to the fuels operator before the fuel servicing operation begins. The only authorized deviation to this procedure is for emergencies involving combat operations or air rescue and evacuation when time does not permit use of an identaplate.

1-9.4 If a USAF transient aircraft requires fuel servicing and does not have an identaplate, the AFTO FORM 781F will be given to fuel servicing personnel for manually preparing the fuel issue document. An entry will be made on the AFTO FORM 781A indicating the identaplate is missing.

1-9.5 If the identaplate is missing at home station, maintenance personnel will take the aircraft AFTO FORM 781F to the Fuels Management Flight (FMF) to obtain a new identaplate. The home station maintenance section, with the assistance of the FMF, will conduct an investigation. As a minimum the investigation will consist of a review of the procedures for assuring return of the identaplate to an aircraft after refueling.

1-10 USE OF USAF AIRCRAFT BY BAILMENT CONTRACTORS AND AIR CARRIER CONTRACT OPERATORS.

1-10.1 Bailment contractors and air carrier contract operators utilizing USAF aircraft will maintain the AFTO FORM 781J and AFTO FORM 95 historical documents.

1-10.2 Use of other AFTO 781 series forms is not required provided substitute forms or documents are utilized to accomplish the intent of these forms.

1-10.3 When an aircraft is returned to an Air Force installation, the bailment contractor or air carrier contract operator will return the forms and make the final entries on the AFTO 781 series forms and AFTO FORMS 95 in accordance with this TO and TO 00-20-2.

1-10.4 Since all Air Force information may not be available to the contractors; the Air Force organization receiving the aircraft will take necessary action to complete the documents or initiate new forms.

1-11 SAFEGUARDING CLASSIFIED EQUIPMENT.

1-11.1 Commanders must take the necessary security steps to protect classified equipment on aircraft at installations under their jurisdiction.

1-11.2 The pilot ensures proper safeguard for classified documents and equipment, while the affected aircraft is at a non-Air Force installation.

1-11.3 When an aircraft has equipment or documents classified confidential or higher, installed or carried aboard, prepare a card of suitable size bearing the appropriate information and insert in the front side of the front cover of the AFTO FORMS 781 binder. If the equipment or documents are not keyed and do not maintain a Cryptographic Controlled Item (CCI) classification status, the card will not be displayed on the front side of the front cover of the binder. It will be maintained in the backside of the front cover of AFTO FORMS 781 binder for future classifying purposes.

1-11.3.1 The card entries identify the assigned security classification and the equipment or documents by their title or nomenclature unless this information is classified. Example: Confidential documents for the AN/APX-P6 carried in the aircraft.

1-11.3.2 Stamp or mark this card in any easy to see manner, such as a red border, to insure that the card and the reason for classification are immediately apparent to anyone who may handle the binder.

1-11.4 When equipment installation classifies the complete aircraft confidential or higher, due to special mission capabilities which should not be divulged, a card of suitable size denoting that the aircraft is classified will be inserted in the front side of the front cover of the binder. If the equipment or documents are not keyed and maintain a CCI classification status, the card does not need to be displayed on the front side of the front cover of the binder. It should be maintained in the backside of the front cover of AFTO FORMS 781 binder for future classifying purposes.

1-11.5 This card will not indicate or in any way divulge the reason the aircraft is classified. Further, safeguard all maintenance documents pertaining to such aircraft as necessary in accordance with existing security directives. Normally, the directives that require such classified installations specify the classification required for the aircraft.

1-11.6 When aircraft are loaded with special weapons, a classified data card is not required in the AFTO FORMS 781 binder.

1-12 GENERAL REQUIREMENTS AND PROCEDURES FOR MAINTENANCE OF TRANSIENT AIRCRAFT.

For off station recovery procedures of AMC aircraft and AMC-gained aircraft, refer to AMCI 21-108, Logistics Support Operations.

1-12.1 The host base GP/CC is responsible for the servicing, inspection, and maintenance of transient aircraft. The host GP/CC or his authorized representative may delegate this responsibility to the aircraft commander (A/C) or pilot if the aircraft is a new or experimental aircraft with which base maintenance personnel are not familiar, or when personnel qualified to provide the required services accompany the aircraft. In such cases, the host unit will provide assistance as necessary.

1-12.2 Commanders will establish procedures and furnish necessary personnel and facilities for handling transient aircraft to assure that servicing, inspection, and maintenance are consistent with the mission of each transient aircraft. Give special consideration to medical or air evacuation aircraft, emergency missions, and special missions.

1-12.3 If the transient maintenance organization cannot accomplish the required inspections, servicing, or repairs because of a lack of qualified personnel, facilities, or material, and the pilot does not wish to continue the flight without accomplishment of these items, the pilot will contact the home station of the aircraft to request assistance. If the pilot elects to proceed on the flight without accomplishment of these items, he/she may give the aircraft an exceptional release. A brief entry describing the situation will be placed in the AFTO FORM 781A.

1-12.4 If the pilot desires omission of an inspection even though the required resources are available, the pilot will make an entry on the AFTO FORM 781A stating the reason for his decision. The pilot will sign the exceptional release. A duplicate of the AFTO FORMS 781A and 781H will be made, and will be retained by the transient maintenance supervisor for not less than 90 days and disposed of in accordance with AFI 37-138, Records Disposition.

1-12.5 When Air Force aircraft land at locations where maintenance services are not available, the commander of the nearest Air Force base provides services or emergency repairs as soon as practical after being notified. If the commander of the nearest Air Force base does not have maintenance services, he or she will obtain maintenance services from the nearest Air Force base with capabilities, or request assistance through the provisions of TO 00-25-107, Maintenance Assistance. The pilot guards the aircraft until required assistance arrives.

1-12.6 Normally, aircraft are not cleared for cross-country flight taking them past a scheduled maintenance inspection while away from home station. The latitude expressed by the word "normally" will be construed as a GP/CC prerogative for exercise only under extenuating circumstances.

1-12.7 Owning commands will advise appropriate en route bases and TDY locations of immediate or urgent action technical orders issued, and coordinate any appropriate action required. Do not release the aircraft for further flight until such TCTOs are accomplished. Urgent action TCTOs issued while the aircraft is away from home station will be recorded on the AFTO Form 781K by the first transient aircraft maintenance activity having knowledge of the TCTO. Recording will be in accordance with chapter 3, and compliance action will be in accordance with the instructions in the TCTO.

1-12.8 Transient Maintenance completes and maintains the AF FORM 861, Base/Transient Job Control Number Register, in accordance with AFI 21-101, Maintenance Management of Aircraft. The job control number register and maintenance data documentation procedures will be in accordance with the 00-20-series TOs.

1-13 MAINTENANCE REQUIREMENTS WHEN EXPENDITURES OF USAF RESOURCES ARE MADE FOR TRANSIENT AIRCRAFT.

1-13.1 Document all expenditures of USAF resources in support of transient aircraft. Commanders of Air Force activities may authorize maintenance and services to be performed on other than Air Force aircraft in accordance with AFI 21-101. As a general rule, this maintenance and servicing is limited to that which is necessary for continuance of safe flight. The GP/CC is responsible for placing stringent controls on recording maintenance actions performed so that reimbursements can be affected. Table 1-1, Documentation Requirements for Transient Aircraft, provides specific documentation requirements.

1-13.2 For aircraft that are frequently involved in cross country missions, locally procured plastic envelopes punched to fit the rings of the 781 binder serve as a pouch for the AFTO FORMS 349 generated while the aircraft is in a transient status.

1-13.3 The transient maintenance supervisor is responsible for the following:

1-13.3.1 Obtain a rubber stamp for overstamping block 30 of the AFTO FORM 349. Obtain a rubber stamp for overstamping block 30 of the AFTO FORM 349.

1-13.3.2 Review of the AFTO FORMS 349 for legibility, accuracy and disposal in accordance with AFI 37-138.

1-13.3.3 Assign and enter a control number for each AFTO FORMS 349 In Accordance With (IAW) TO 00-20-2.

1-13.3.4 Record the control number for each AFTO FORM 349 in block 28 of the AFTO FORM 349.

1-13.3.5 Prepare a form letter to Financial Management (FM)/Financial Services with a first endorsement from FM to the transient maintenance supervisor. Provide blank spaces in this endorsement for recording the control numbers for all AFTO FORMS 349 to be forwarded, and a date and signature block for FM to acknowledge receipt of these forms.

1-13.3.6 Record all control numbers on the cover letter, attach all original copies of the AFTO FORMS 349, and forward them to accounting and finance.

1-13.3.7 Upon receipt of the first endorsement, attach the endorsement to copy one (1) by the first control number in the letter, and then file.

1-13.4 When AFTO FORMS 349 are required they will contain the following information.

1-13.4.1 BLOCK 2, "WORK-CENTER." Enter the work-center code of the activity performing the work. Leave block 2 on the copy going to the home station blank.

1-13.4.2 BLOCK 3, "ID NO./SERIAL NO." Enter the serial number of the transient aircraft.

1-13.4.3 BLOCK 4, "MDS." Enter the mission, design, and series, (MDS) of the aircraft.

1-13.4.4 BLOCK 5, "SRD." Enter the STANDARD REPORTING DESIGNATOR (SRD) of the transient aircraft. When SRD "AHX" is used to identify Non-Air Force aircraft, the entry in block 4 must be "NONAF."

1-13.4.5 BLOCK 26, "DISCREPANCY." Enter a brief description of services rendered. Example: Preflight inspection, tire change, calibrated fuel quantity indicator, and removed and replaced radar receiver transmitter. Use block 27 as a continuation of block 26 for these recordings.

1-13.4.6 BLOCK 29, "PARTS REPLACED DURING REPAIR." Enter in Columns A, B, and F the appropriate information for each part replaced. The National Stock Number (NSN) may be entered in blocks A and B in lieu of Federal Supply Classification (FSC) and part number.

1-13.4.7 BLOCK 30, "CONTINUED FROM" block. Over-stamp this block to allow for the following entries.

1-13.4.8 Address of the organization or agency receiving service or maintenance.

1-13.4.9 The agency owning the aircraft.

1-13.4.10 The aircraft commander's signature.

1-13.4.11 The quantity and type of items serviced. Example: 2,000 gallons JP8 or 7 liters liquid oxygen.

1-13.4.12 Labor Hours. Enter the pay grade of each individual and their labor hours expended in rendering the required services and maintenance including specialist labor hours.

1-13.5 Attach an AFTO FORM 350 to parts removed from non-Air Force aircraft and processed to supply. Complete this form for stock listed items. Complete as much of the forms as possible for non-stock listed items. For non-USAF aircraft, clearly mark these forms in red to identify the agency or activity that owned the aircraft from which the item was removed such as 82nd Airborne Division, US Navy, or Saturn Airways. Write or print this beside the tag number in the lower right hand corner of PART I of the form.

1-13.6 The maintenance officer provides the AFO with information, including DD FORM(s) 1348 and AFTO FORMS 349 or maintenance data collection listings, to support requests for transient aircraft service and maintenance reimbursement. Include information the pay grade and labor hours for each individual.

1-14 DECONTAMINATION PROCEDURES AND DOCUMENTATION.

When an aircraft or its components or parts are suspected to have been contaminated follow the procedures in table 1-2.

Table 1-1. Documentation Requirements for Transient Aircraft

<table>
<tr><th rowspan="2">Transient Aircraft Belong To</th><th colspan="4">Reimbursement Documentation Required By Accounting and Finance (A&F) For:</th><th rowspan="2">If Work is Preformed or Discrepancy or is noted, Make an AFTO 781 Entry</th><th rowspan="2">If Work is Preformed, Prepare an AFTO FORM 349 In</th><th rowspan="2">If a Repairable Item is Removed, Prepare an AFTO FORM 350 In</th></tr>
<tr><th>Labor for On-Equip Maint</th><th>Labor For Off-Equip Maint</th><th>Parts Lubricants Oxygen ADI etc.</th><th>Labor For Parking Follow Me Servicing Launching</th></tr>
<tr><td>USAF Including ANG and AFRES</td><td colspan="4">NO</td><td>YES</td><td>Two Copies, 1 for local use, 2nd for home station. Note 1</td><td>One Copy</td></tr>
<tr><td>DoD Army Navy Marine AF/DoD</td><td colspan="2">YES Note 4</td><td>YES</td><td>NO</td><td rowspan="3">Assist Crew In Completing Comparable Forms</td><td rowspan="3">Three Copies, 1 to A&F, 2nd to Transient Maint, 3rd to pilot.</td><td>Two Copies, 1 for local use, 2nd to A&F</td></tr>
<tr><td>Non-DoD US Gov, FAA, NASA, USCG</td><td colspan="3">YES</td><td rowspan="2">One Copy For Transient Maint</td><td rowspan="2">One Copy</td></tr>
<tr><td>CAP, at AF Request, IAW AFI 36-5001</td><td colspan="3">NO</td><td></td><td></td></tr>
<tr><td>2nd ADG For FMS or MAP</td><td>YES</td><td rowspan="3">YES</td><td>YES</td><td>YES</td><td colspan="2">Two copies, 1 copy to Transient Maint 2nd copy to A&F Note 2</td></tr>
<tr><td>Foreign Govern-ment, Military</td><td>NO</td><td>NO Note 3</td><td>Assist Crew In Completing Their Comparable Forms</td><td>Two Copies, 1 to Transient Maint, 2nd to A&F</td><td rowspan="2">Two Copies, 1 For Local Use 2nd For A&F</td></tr>
<tr><td>Commerc-ial/ Private, and CAP Contract</td><td>YES</td><td>YES</td><td>Three Copies 1 to A&F 2nd to Trans. Maint, 3rd to pilot</td></tr>
</table>

NOTES FOR TABLE 1-1

Note 1. When a transient maintenance base accomplishes TCTOs, the original AFTO FORM 349 will be placed in the 781 binder for home station use in updating historical files. Transit Maintenance uses the duplicate copy for production count and submission of data as prescribed in AFCSM 21-568, Vol. 2.

Note 2. The AFTO FORMS 349 and 350 must include the delivery project number and military case number in the DISCREPANCY block.

Note 3. Labor expended for on-equipment work such as follow-me service, parking, servicing and preparation for launch will not be charged unless otherwise specified in HQ USAF/CVAFI message granting authorization for landing.

Note 4. Civilian labor only.

Table 1-2. Decontamination Procedures and Documentation

STEP	A WHEN	B THEN
1	an aircraft, installed components or parts are suspected to have been contaminated	the pilot will advise the tower of the known or suspected contamination and request that isolated parking be provided for the aircraft.
2		a security police team will establish a cordon around the aircraft.
3		the ground crew and maintenance personnel will not be permitted to approach the aircraft or to begin servicing or maintenance until after the aircraft is completely inspected and decontaminated, if necessary.
4		the Disaster Preparedness Support Team will perform detection in accordance with prescribed procedures to determine the type, amount, and location of contamination.
5		the Disaster Preparedness Support Team will direct maintenance personnel to enter the red X on the AFTO FORM 781A and describe the extent and type of contamination (nuclear, biological or chemical)
6	isolated parking is necessary, a security police team will secure the area and the organizational section	decontaminate the aircraft, component or parts in accordance with prescribed procedures.
7		in the event an aircraft part cannot be acceptably decontaminated, the component or part will be removed and disposed of as contaminated waste.
8	contamination occurs with a chemical agent	a special entry will be made in the "CALENDAR INSPECTION" section of the AFTO FORM 781K to indicate that a special detection re-inspection is required at the next three scheduled hourly post-flight, periodic, phase, minor or major inspections.
9	the aircraft, its components or parts have been decontaminated and released by the Disaster Preparedness Support Team	the signature of the aircraft maintenance decontamination team chief will be entered in the "INSPECTED BY" block, and the last name initial placed over the symbol.
10		maintenance personnel will perform corrosion control as required, since some decontaminants are highly corrosive.

Table 1-2. Decontamination Procedures and Documentation - Continued

	A	B
STEP	WHEN	THEN
11		maintenance personnel will make an entry on the AFTO FORM 95 to describe the type and extent of contamination including the unclassified designator of the contaminate involved and the decontamination used.
12	the local commander has established necessary administrative procedures related to accomplishing decontamination of the aircraft	the signature of the aircraft maintenance decontamination team chief will be entered in the "INSPECTED BY" block, and the last name initial placed over the symbol.
13		there will be plans for establishing isolated areas.
14		there will be assurance that required decontamination is accomplished and verified by qualified personnel.
15		there will be procedures for returning the aircraft to service after decontamination is performed.
16		there will be plans and procedures for providing maintenance guidance and/or assistance to the disaster preparedness team.

CHAPTER 2

BASIC INSPECTION CONCEPTS

2-1 BASIC INSPECTION CONCEPTS.

2-1.1 There are six authorized inspection concepts used for aerospace vehicles covered by this TO. These are periodic, phased, isochronal, programmed depot maintenance (PDM), and the air line/manufacturer maintenance program inspections, which are accomplished in accordance with the applicable -6 scheduled inspection manual or inspection workcards. The GP/CC establishes the necessary controls to assure that the periodic, phased or isochronal inspections are accomplished at or near the scheduled due time. The Single Manager (SM) will, in coordination with the using agency, schedule the PDM inspection at, or prior to, the scheduled due time. The -6 inspection workcards may include varying calendar inspection periods (7-day, 14-day, etc.) as determined by the weapon system SM and MAJCOM. Inspections for support and training equipment include servicing, operator, special, periodic, acceptance, transfer, and WRM/Mobility Inspections.

2-1.2 The basic sub-elements for the periodic, phased, isochronal, and airline manufacturer maintenance concepts are as follows.

2-1.2.1 PERIODIC CONCEPT:

2-1.2.1.1 Pre-flight (PR).

2-1.2.1.2 End-of-Runway (EOR).

2-1.2.1.3 Thru-flight (TH).

2-1.2.1.4 Basic Post-flight (BPO).

2-1.2.1.5 Combined Pre-flight/Basic Post-flight or Pre-flight/Thru-flight.

2-1.2.1.6 Hourly Post-flight (HPO).

2-1.2.1.7 Periodic (PE).

2-1.2.2 PHASED CONCEPT:

2-1.2.2.1 Pre-flight.

2-1.2.2.2 End-of-Runway.

2-1.2.2.3 Thru-flight.

2-1.2.2.4 Basic Post-flight.

2-1.2.2.5 Combined Pre-flight/Basic Post-flight or Pre-flight/Thru-flight.

2-1.2.2.6 Hourly Post-flight.

2-1.2.2.7 Phase (PH).

2-1.2.3 ISOCHRONAL CONCEPT:

2-1.2.3.1 Pre-flight.

2-1.2.3.2 End-of-Runway.

2-1.2.3.3 Thru-flight.

2-1.2.3.4 Basic Post-flight.

2-1.2.3.5 Combined Pre-flight/Basic Post-flight or Pre-flight/Thru-flight.

2-1.2.3.6 Home Station Check (HSC).

2-1.2.3.7 Minor (MIN).

2-1.2.3.8 Major (MAJ).

2-1.2.4 Programmed Depot Maintenance

2-1.2.5 AIRLINE/MANUFACTURER MAINTENANCE CONCEPT

2-1.2.5.1 A Check.

2-1.2.5.2 B Check.

2-1.2.5.3 C Check.

2-1.2.5.4 D Check.

2-1.3 Major Commands may authorize certain aircraft to use a modified inspection workcard deck during contingencies, sortie surge exercises and increased readiness conditions. The SM designates and publishes these inspection workcards in conjunction with the using MAJCOM, for use only during periods of increased flying in sup port of such activity. Construct the contingency decks to assure that all items that would impact aircraft safety and reduce aircraft reliability are inspected. Contingency decks are designed for use during a limited period of time as authorized by the MAJCOM. Accomplish the normal inspection workcard deck upon termination of the contin gency, increased readiness or at the expiration of the authorized usage period as directed by the MAJCOM.

2-1.4 Each SM determines the minimum scheduled inspection requirements for assigned weapon systems and for ensuring these requirements are maintained current. These requirements are pub lished in the initial -6 inspection manual and also in inspection workcard decks, (e.g. pre-flight, basic post-flight, thru-flight, etc). After the initial publication, the SPM may, in coordination with applicable commands, delete Section I from the -6 manual. Section I contains the same inspection requirements as published in the inspection work card decks.

NOTE

Specific item inspection requirement such as aircrew life support or Car tridge Actuated Devices/Propellant Actuated Devices (CAD/PAD) may not readily interface with the following inspection concept cycles due to excessive service life remaining. In these cases, consider alternate procedures for accomplishment.

2-2 SPECIFIED FLYING PERIOD.

The specified flying period begins with the first flight and continues for a period of hours as specified by the owning MAJCOM.

2-3 PRE-FLIGHT INSPECTION.

2-3.1 The pre-flight inspection is a flight preparedness check done in accordance with the -6 scheduled inspection and maintenance requirements manual. The pre-flight inspection includes visually examining the aircraft and operationally checking certain systems and components to ensure there are no serious defects or malfunctions.

2-3.2 A pre-flight will be required under the following conditions.

2-3.2.1 Prior to the first flight of the flying period or when the pre-flight validity period has expired.

2-3.2.2 When the pre-flight validity period is 72 hours and the aircraft has not flown within 48 consecutive hours, except when waived in accor dance with the following paragraph.

2-3.3 MAJCOMs, in conjunction with the aircraft SM, may select a 24, 48 or 72 hour pre-flight validity period.

2-3.3.1 If a pre-flight validity period of 72 hours is selected and the aircraft has not flown within 48 consecutive hours during the period, accomplish another pre-flight prior to next flight. This new pre-flight would then be valid for up to 72 hours.

2-3.3.1.1 The SM and MAJCOM may waive the 48 consecutive hour requirement when agreed to in writing. Publish the waiver in the MAJCOM Supplement. The SM will forward a copy of the approved waiver to HQ

USAF/ILM. With using command concurrence and SM approval, the 48 consecutive hour requirement waiver will be pub lished in the applicable -6 workcards in lieu of the MAJCOM supplement.

2-3.4 When an aircraft is mobilizing for deployment, units are authorized to seal the aircraft. It must be prepared in accordance with established technical orders, accepted by an aircrew, remain under the control of operations, but is tracked by maintenance.

2-3.5 Accomplish a complete pre-flight inspection for aircraft on alert status prior to going on alert and again before flight after completion of the alert period if the pre-flight validity period has been exceeded. Continuous monitoring by the air crew and accomplishing the alert pre-flight, alert checklist, and scramble checklist during the alert period should ensure that the aircraft is airworthy. Consequently, further pre-flight inspection or certification of a pre-flight inspection is not required during the alert period.

NOTE

Placing a unit on alert does not in itself place the units aircraft on alert status. Specific actions must be taken on each aircraft to place them on alert status.

2-3.6 MAJCOMs may authorize the use of abbreviated thru-flight checklists or Integrated Combat Turn (ICT) (Quick Turn) checklists for those air craft resuming alert after flight or placing aircraft on alert at site locations.

2-4 END-OF-RUNWAY INSPECTION.

2-4.1 The EOR inspection is a final visual and/or operational check of designated aircraft systems and components. It applies to aircraft designated in joint agreement between the MAJCOMs and appropriate SM. The SM will list minimum inspection requirements in the applicable -6 and publish in an existing workcard deck.

2-4.2 Use checklists developed in accordance with the policy contained in this paragraph when conducting this inspection.

2-4.3 Performed immediately prior to take-off at a designated location usually near the end of the runway.

2-4.4 The purpose of the inspection is to detect critical defects that may have developed or have become apparent during ground operation of the aircraft after departing the aircraft parking spot.

2-4.5 Perform this inspection when any applicable aircraft is launched from either home station or a transient USAF base.

2-4.6 Alert aircraft launched from alert status do not require this inspection.

2-4.7 The inspection may include items such as the following:

2-4.7.1 Tires for cuts.

2-4.7.2 Fluid system for leakage.

2-4.7.3 Panels and doors closed and fastened.

2-4.7.4 Down locks, covers, and pins removed, and so forth.

2-4.7.5 Primary flight control operation.

2-4.7.6 IFF mode 4 check.

2-4.8 If local requirements dictate, publish additional guidance to technical orders for the inspec tion in accordance with TO 00-20-1 and TO 00-5-1. MAJCOMs must insure standardization, when practical, between assigned units.

2-5 THRU-FLIGHT INSPECTION.

2-5.1 The thru-flight inspection is a "between flights" inspection and will be accomplished after each flight when a turn-around sortie or a continuation flight is scheduled and a basic post-flight inspection is not required. This inspection is applicable when prescribed by the applicable -6 scheduled inspection and maintenance requirements manual. The thru-flight inspection consists of checking the aircraft for flight continuance by performing visual examination and/or operational checks of certain components, areas, or

systems, according to established TOs to assure that no defects exist which would be detrimental to further flight.

2-5.2 Certain aircraft have thru-flight inspection requirements identified by asterisks in applicable workcard decks. Other aircraft have separately published thru-flight inspection workcard decks.

2-5.3 Accomplish the thru-flight inspection both between flights and after the flying period or mission. The SM, in conjunction with the MAJCOM, may establish a thru-flight and a basic post-flight inspection as under the phase and periodic inspection concepts. If this option is not exercised, accomplish the thru-flight inspection after the last flight of the day or upon completion of the mission as well as between each flight. For thru-flight inspection requirements for aircraft on alert see paragraph 2-3.6.

2-5.4 MAJCOMs will determine thru-flight requirements for quick turn operations.

2-6 BASIC POST-FLIGHT INSPECTION.

2-6.1 This inspection will consist of checking the aircraft condition by performing visual examination or operational checks of certain components, areas, or systems to assure that no defects exist which would be detrimental to flight.

2-6.2 Maintenance personnel perform a basic post-flight after the last flight of a specified flying period or a combined pre-flight/BPO prior to the next flying period.

2-6.3 The basic post-flight inspection is a more thorough check than the pre-flight or the thru-flight inspections and is accomplished in accordance with the -6 scheduled inspection and maintenance requirements manual for the aircraft.

2-7 COMBINED PRE-FLIGHT/BASIC POST-FLIGHT OR PRE-FLIGHT/THRU-FLIGHT INSPECTION.

2-7.1 The SM, in conjunction with the MAJCOM, has the option of combining the pre-flight and basic post-flight inspections. This inspection consolidates the requirements of the pre-flight and basic post-flight inspections into a single inspection accomplished at the end of the specified flying period or prior to the first flight of the next specified flying period.

2-7.2 It eliminates duplication of inspection items that would occur if separate inspections were performed.

2-7.3 It has the same validity period as the pre-flight and basic post flight inspection.

2-7.4 Aircraft operating under the isochronal inspection concept that do not have a basic post-flight inspection will have a thru-flight inspection performed. The thru-flight will be accomplished at the end of the specified flying period and may combined with a pre-flight inspection. For aircraft operating under the isochronal inspection concept that have not established a basic post-flight inspection, the thru-flight designated to be performed at the end of the specified flying period is the inspection that may be combined with the pre-flight inspection.

2-8 HOURLY POST-FLIGHT INSPECTION.

2-8.1 Accomplish the hourly post-flight inspection at equally spaced intervals as specified in the applicable -6 TO.

2-8.2 Determine the due time for all hourly post-flight inspections at the completion of each periodic/phased inspection. Early or late accomplishment of any hourly post-flight does not normally change the scheduled time for the next hourly post-flight.

2-8.3 Hourly post-flights are due at the completion of the mission during which the specified flying hour is accrued. What constitutes a mission is based on the operational program and specified by the commander or local authority. A mission as previously referenced may be:

2-8.3.1 A single flight.

2-8.3.2 A series of specific sorties.

2-8.3.3 A series of short-range training flights.

2-8.3.4 A series of flights to complete an extended cross-country mission.

2-9 PERIODIC INSPECTION (PE).

The periodic inspection is due upon accrual of the number of flying hours, operating hours, or at the expiration of a calendar period specified in the applicable -6 TO. The periodic inspection is more extensive in scope than the hourly post-flight or basic post-flight inspection. This inspection is a thorough and searching inspection of the entire weapon system or support system.

2-10 PHASE INSPECTIONS (PH).

2-10.1 The phased inspection concept involves consolidation of the basic post-flight and/or hourly post-flight and periodic inspection requirements into small packages having approximately the same work content and approximately the same number of clock hours for accomplishment. The primary objective of the phased inspection concept is to minimize the length of time that an aircraft is out-of-commission for any given scheduled inspection. The phased inspection concept does not apply to those aircraft types for which the inspection requirements cannot be divided into reasonably equal packages. Accomplish the phased inspections upon accrual of the number of flying hours specified in the applicable -6 scheduled inspection and maintenance requirements manual. The applicable inspection workcard introduction specifies the number of packages that can be combined for an approved inspection program.

2-10.2 The inspection workcards identify the applicability of the phase inspection concept. The number of phased packages varies with different aircraft and depends on the inspection requirements involved, manhours required to perform any given package, and the requirements of preparation and pre-positioning of equipment needed to accomplish each phased package. Through the application of this concept, a portion of the total recurring inspection requirements is accomplished at each phase and the cycle is repeated after com- plet ion of the last package. Treat recurring inspection requirements that have an interval greater than that specified for a complete cycle as hourly or calendar inspection requirements and make an entry on the AFTO FORM 781K or automated systems as required.

2-10.3 Schedule phased inspections at equal intervals throughout the total inspection cycle regardless of when the inspections are actually accomplished. As an example, in a phased inspection cycle having a 50-hour inspection interval, 12 inspection packages and a 600-hour total cycle; inspections are scheduled at 50 hours, 100 hours, 150 hours, and so forth. Aircraft phased at depot have their interval zeroed out and a new interval will be started.

2-10.4 When aircraft under the phased concept are required for extended missions, the required number of phase packages may be accomplished in advance to cover the period of the intended mission, when authorized by the applicable -6 TO. In addition to the inspection requirements peculiar to each phase package, perform recurring inspection items listed in each phase workcard deck once for the entire package grouping. Upon return of the aircraft, normal scheduling of the phase packages will be resumed.

2-11 ISOCHRONAL (ISO) INSPECTION CONCEPT.

2-11.1 The isochronal concept translates flying hour utilization rates into calendar periods, usually expressed in days. The SM ensures the calendar period is properly established to meet maintenance and engineering requirements. In the event programmed flying hours are changed, adjust inspection interval as specified in the -6 scheduled inspection and maintenance manual. The SM, in conjunction with the MAJCOM, determines the necessary adjustments.

2-11.2 To manage the isochronal inspection concept properly, schedule the major and minor inspections as far in advance as possible for each weapon system or support system.

2-11.3 The isochronal concept allows for the time that an aircraft is programmed to be in inspection status. The interval time frame is from the inspection post-dock to the next pre-dock.

2-11.4 MAJCOMs, with SM concurrence, approve deviations to schedules major or minor inspections cannot be met. Criteria for deviations should be, but are not limited to, aircraft removed from service for extended periods of time (e.g. depot level maintenance in accordance with TO 00-25-107), extended fuel repair and TCTO kit proofing. The GP/CC establishes procedures to ensure these air craft are placed in storage in accordance with TO 1-1-17, when required.

2-11.5 Aircraft in DJ Status awaiting depot input, or undergoing unprogrammed depot level maintenance (UDLM), do not accrue -6 inspection days during these periods.

2-11.6 Isochronal inspections for inspection system, documentation, and status reporting for ground-launched missiles and their trainers, SE, and ground C-E equipment. These permit inspections to be due at equal intervals throughout the total inspection cycle, regardless of when the inspections were actually accomplished. Isochronal inspections are based on calendar intervals using the following due periods.

TYPE	INTERVAL	DUE PERIOD
Major	Semi-annual or greater	Within due month, "By the end of the month"
Minor	Semi-monthly, bi-monthly, quarterly, to, but not including semi-annual	Within due week
Minor	Weekly	Due date ± one work day
Minor	Daily	On due date

* Weekly intervals will begin on Sunday and semi-monthly intervals will begin on the first and sixteenth of each month.

NOTE

ICBM units will use an isochronal inspection system in accordance with the applicable -6 technical orders.

2-12 HOME STATION CHECK INSPECTION.

The home station check consists of inspection requirements arranged and designed for accomplishment when the aircraft returns from a long range mission or upon expiration of a specified short-term calendar interval. This inspection is due at the calendar interval specified in the -6 scheduled inspection and maintenance manual. Since the HSC is an integral part of the isochronal concept, compute this date from the completion of the last HSC/isochronal inspection. Accomplish the inspection in conjunction with minor and major inspections.

2-13 MINOR INSPECTION (ISOCHRONAL).

The minor inspection is due upon accrual of the number of calendar days established as the inspection interval in the applicable -6. Compute this date from the completion of the last major inspection. The minor inspection consists of checking certain components, areas, or systems of the aircraft to determine if conditions exist which, if uncorrected, could result in failure or malfunction of a component prior to the next scheduled inspection.

2-14 MAJOR INSPECTION (ISOCHRONAL).

2-14.1 The major inspection is due upon accrual of the number of calendar days established as the inspection interval in the applicable -6.

2-14.2 Compute this date from the completion of the last major inspection.

2-14.3 The major inspection is a thorough and searching inspection of the entire weapon system or support system, and individual requirements may be more extensive in scope than previous inspection items.

2-14.4 The inspection consists primarily of checking certain components, areas, and systems of the weapon system or equipment, which due to their function, require less frequent inspection than that required by other inspections.

2-15 AIRLINE / MANUFACTURER MAINTENANCE CONCEPT.

2-15.1 Letter checks consist of A through D. "A/B" checks are considered minor inspections and usually performed at home station. "C/D" checks are considered major inspections and usually performed at a Heavy Maintenance/Depot facility.

2-15.2 The letter check concept is specified in either flying hours or calendar days. The SM ensures the inspection period is properly established to meet maintenance and engineering requirements. In the event inspection intervals are changed, adjust the interval as specified in the -6 scheduled inspection and

maintenance manual or applicable Maintenance Planning Document (MPD). The SM, in conjunction with the MAJCOM, determines the necessary adjustments.

2-15.3 The interval time frame will be defined in the applicable -6 scheduled inspection and maintenance manual or Maintenance Planning Document (MPD).

2-15.4 MAJCOMs, with SM concurrence, approve deviations to schedules if letter check inspections cannot be met.

2-15.5 Accrual of inspection days while an aircraft in DJ status awaiting depot input, or undergoing unprogrammed depot level maintenance (UDLM), is dependent on the -6 or MPD criteria for the specified airframe.

2-16 PERIODIC AND PHASE ADJUSTMENTS.

2-16.1 In this context, Periodic and Phase mean the same.

2-16.1.1 Periodic inspections are cumulative for the life of an aerospace vehicle. The number of the next-due periodic inspection should be the same as the number obtained by dividing the aerospace vehicle hours at which the next PE is due by the hourly inspection interval. The number obtained may vary from the actual PE number due because of transfers and premature or overdue flying hour inspections.

2-16.2 When the periodic inspection interval for the aerospace vehicle is changed by a revision of the -6 maintenance manual and/or the automated information system, adjust the periodic due.

2-17 PROGRAMMED DEPOT MAINTENANCE (PDM).

PDM is an inspection requiring skills, equipment or facilities not normally possessed by operating locations. Individual areas, components and systems are inspected to a degree beyond -6 inspections. Field level tasks may be accomplished at PDM if their accomplishment is economically feasible. PDM is accomplished at an interval established in TO 00-25-4, table II and is measured from output to input date for each PDM. Aircraft under the isochronal concept do not accrue -6 inspection days towards the next isochronal inspection during PDM. This includes aircraft input to a depot for an Analytical Condition Inspection (ACI). When an aircraft exceeds the PDM cycle, annotate a Red Dash on the prescribed forms. If an aircraft exceeds the PDM cycle by 90 days, the Red Dash will be upgraded to a Red X unless the SM grants an extension.

2-18 CALENDAR INSPECTIONS.

2-18.1 Thirty (30)-Day Inspection. When an aircraft does not fly or is out-of-commission for more than 30 days consecutive, it requires a basic post-flight before the aircraft is returned to operational status. If no basic post-flight inspection exists, perform a home station check or equivalent inspection. This will be construed as a minimum 30-day calendar inspection and the GP/CC will determine whether additional inspection or maintenance work is required. This paragraph does not apply to aircraft that are on ground alert where recurring visual inspections and operational checks are accomplished.

2-18.2 Ninety (90)-Day Inspection. When an aircraft does not fly for 90 consecutive days (does not apply to ground alert or training aircraft where recurring visual inspections and operational checks are accomplished), accomplish the following before the aircraft is returned to operational status.

2-18.2.1 Perform a basic/hourly post-flight/home station check, as determined by the GP/CC.

2-18.2.2 Perform an operational check of all functional aircraft systems (excluding landing gear retraction).

2-18.2.3 Accomplish all lubrication requirements.

2-18.2.4 Perform any additional inspection or maintenance requirements determined by the GP/CC.

2-18.3 Under the phase inspection concept, accomplish recurring inspection items (required items at each inspection) as a minimum requirement for the 90-day calendar inspection.

2-18.4 Accomplishing either the 30- or 90-day inspection affects only the basic post-flight or home station check inspection status. Flying time accrued toward a phase or periodic inspection remains charged against the aircraft, for the next inspection. For aircraft under the isochronal concept, storage time accrued in accordance with TO 1-1-17 exceeding 15 calendar days, is not charged against the calendar time for the next scheduled home station check, minor or major inspection. However, the calendar days that have elapsed between the inspections and the date on which the aircraft was placed in storage is charged against the aircraft and used to adjust the due dates for the next inspections when the aircraft is removed from storage.

2-18.5 Aircraft in PDM do not require the items identified in paragraph 2-18.2 to be re-accomplished, if they were accomplished and documented as a part of the PDM package and 90 days have not elapsed since their accomplishment.

2-19 ALTERNATE MAINTENANCE EQUIPMENT (AME).

2-19.1 Inspection requirements for Alternate Maintenance Equipment (AME) are based on the usage category assigned. Each of the three categories, in-use/on aircraft, ready storage, and extended storage will determine the degree of inspection and maintenance required.

2-19.2 The inspection intervals and what to inspect for the in-use/on aircraft category of airborne AME systems are in the applicable -6 scheduled inspection and maintenance requirements manual. This manual refers to the commodity or equipment manuals that contain the specific inspection criteria.

2-19.3 The inspection interval, storage criteria, and maintenance requirements for the ready storage and the extended storage categories are contained in the commodity or equipment manuals.

2-20 PRE-LAUNCH IFF MODE 4 CHECK.

Perform IFF Mode 4 check IAW MAJCOM directives.

2-21 C-E MAINTENANCE INSPECTION REQUIREMENTS.

2-21.1 Responsibilities. It is the responsibility of the work center supervisor in conjunction with Maintenance Control to ensure the accuracy and completeness of the documents prescribed by this technical order. The Chief of Maintenance is responsible for ensuring that required maintenance inspections are performed.

2-21.2 Maintenance Inspections. Scheduled maintenance inspections and their intervals are prescribed in inspection manuals, inspection workcards, Air Force Communications Electronic Maintenance Instructions (AFCEMI), or repair manuals. All requirements pertaining to such inspections will be accomplished concurrently, if feasible, to avoid complications in controlling and scheduling the required maintenance. The intervals specified for the scheduled maintenance inspections and for recurring supplementary inspections represent the maximum interval between accomplishment of such requirements. Therefore, these intervals will not be exceeded without authority from the system manager (SM) or the item manager (IM) (See paragraph 2-20.5.2). The inspection intervals are used to develop user level master inspection schedules. The local Chief of Information Systems Flight (CISF) is authorized to deviate from their respective unit inspection schedules in accordance with AFI 21-116, paragraph 4.7.14. Changes to prescribed inspection requirements, as well as changes in inspection intervals or concepts, will be accomplished through analysis of maintenance data collected. Changes approved by the IM will be published in technical orders or inspection workcards. Maintenance personnel will assure that equipment is properly serviced and safe for use prior to dispatch and operation.

2-21.3 Time Compliance Technical Order (TCTO) Status. Procedures for processing time compliance technical order (TCTO) system are contained in AFI 21-116 attach 6, and TO 00-20-2.

2-21.4 Inspection of Ground C-E Equipment.

2-21.4.1 Inspection of ground C-E equipment, photographic equipment, SE, and training equipment for which no inspection workcards are published will be based on sound maintenance practices. (Shelters used as radomes and vans requiring cursory inspections as reflected in applicable maintenance Technical Orders will be used in lieu of dash 6 inspections.) The Chief of Maintenance (CoM), in conjunction with the SM, will determined if checklists and/or workcards are required for this equipment type, and if so, ensure that they are developed in accordance with the instructions contained in the AFI 21-116, TO 00-5-1, and the 00-20-series technical orders. Maintenance personnel will assure that equipment is properly serviced and safe for use prior to dispatch or operation. A Preventive Maintenance Inspection (PMI) system is authorized for those activities which possess numerous types of training equipment that require application of several different inspection systems. When the PMI system is used, the CoM will establish controls to assure inspection intervals prescribed by applicable manuals, workcards, or checklists are not exceeded except to meet essential mission requirements.

2-21.4.2 Mandatory PMIs, specified in inspection workcards and maintenance manuals, due at intervals of less than 56 days are waived for all equipment that is in a stored and/or inactive status. Instead, the required inspections will be accomplished at intervals not to exceed 56 days. PMIs due at intervals of 56 days or greater, will continue to be performed at their designated interval. When an item of equipment requires

multiple interval inspections on the same day, such as a 7-, a 14-, and a 28-day inspection, the inspections of lesser intervals will be accomplished as part of the longer interval and documented as one inspection. All C-E equipment that have a maintenance suspension by Class T-1 and T-2 modification that renders the equipment non-operational are granted a waiver from performing PMIs when the following conditions are satisfied.

2-21.4.2.1 Not economically feasible to remove by modification.

2-21.4.2.2 No foreseeable operational requirement.

2-21.4.2.3 No requirement for like equipment in other operational systems.

2-21.4.2.4 Periodic cleaning and corrosion control are still required and procedures will be established in accordance with AFI 21-116, paragraph 6.6.3.

2-21.4.3 In the C-E maintenance complex, the CoM may waive the accomplishment of scheduled inspections under the conditions listed below. When daily scheduled inspections are not performed the MDC Master ID Listing will be annotated to reflect the exemption.

2-21.4.3.1 Work centers responsible for maintenance of C-E in facilities at locations where 24-hour manning is not provided and those facilities and sites that are manned for a 40 hour workweek, five eight hour days, Monday through Friday.

2-21.4.3.1.1 Daily PMIs maybe waived for Saturday, Sunday, and holidays.

2-21.4.3.1.2 Daily PMIs may be waived at unmanned communications sites.

2-21.4.3.1.3 Seven-day or higher interval PMIs may be performed on the last day preceding or the next working day following a PMI scheduled on a holiday. Under these circumstances, the Mechanized PMI schedule will not have to be readjusted.

2-21.4.3.2 Inspection requirements with an interval of less than 168 days may be done as determined by the major command if manpower or equipment constraints exist. At ANG or reserve activities where C-E equipment is used, strictly for training purpose (no operational requirement exists) the maintaining organization need only to perform the scheduled inspections at 168 day intervals. During tactical deployments of 30 days or less, scheduled PMIs of 168 days or less may be waived when the inspection is accomplished during the pre-deployment inspection.

2-21.5 C-E Maintenance Historical Documentation.

2-21.5.1 APPLICABILITY. The AFTO FORM 95 will be maintained on specifically identified end items of C-E equipment listed in CAMS (screen 126. TRIC:QCC) and command supported equipment designated by major commands. In addition, an AFTO FORM 95 will be initiated upon issuance of the first TCTO (if the TCTO is not reported in accordance with CAMS user manuals or the occurrence of the first maintenance condition or incident requiring data entries.

2-21.5.2 The following additional instructions apply to C-E equipment maintained by units with mobile communication equipment and mobile communications groups.

2-21.5.2.1 One AFTO FORM 95 will be maintained on each mobile facility to record significant historical data; however, in cases where a facility is comprised of more than one van, an AFTO FORM 95 will also be maintained on each van. An AFTO FORM 95 will be maintained on each end item of equipment not permanently assigned to a van or facility and should these items be permanently transferred to a van, all entries will be transcribed to the document for the assigned van. Items permanently removed from a van will require initiation of new documents and transfer of pertinent information.

2-21.5.2.2 When a centralized file is maintained, a duplicate copy of historical documents will accompany all deployed equipment and appropriate entries will be accomplished on the documents while deployed. When the equipment is returned to the home station, the original documents will be updated. If job control, maintenance control, or the work center maintaining the centralized files deploys with the equipment, then the centralized original files may be taken and not duplicated. When a decentralized system is maintained, the duplication process is not required if the original historical documents accompany the equipment when deployed.

2-21.5.3 At a minimum, the following actions require entries: on AFTO 95 for C-E equipment.

2-21.5.3.1 Accomplishment of depot level maintenance. A responsible agent at the depot repair facility or the team chief of an on-site maintenance team will enter a description of depot level maintenance performed. For non-operationally ready COMSEC equipment in storage at the USAF Cryptologic Depot. The following policies apply:

2-21.5.3.2 When historical documents don't exist on equipment to be placed in storage, they need not be initiated.

2-21.5.3.3 Historical documents for items placed in storage need not be maintained if maintenance or modification of the equipment does not occur.

2-21.5.3.4 When items are removed from storage for return to the active inventory or are forwarded to another agency or country for use. The historical documents must be completed to reflect the current configuration of the item. Any maintenance or modifications required to return the item to service should be indicated on appropriate historical documents at that time.

2-21.5.4 The installation of end items of equipment together with any variances from the installation criteria specified in the equipment technical orders of installation manual. If the facility or equipment requires a flight check before commissioning, the initial flight check data will be entered, together with any significant maintenance actions that were required to pass initial flight check.

2-21.5.4.1 The removal or decommissioning of end items of equipment and the date the equipment was packed for shipment or the date the equipment was placed in storage as applicable.

2-21.5.4.2 The removal and replacement of items resulting from excessive contaminants discovered through the Spectrometric Oil Analyzed Program (SOAP).

2-21.5.4.3 Remarks concerning special service tests, and special test equipment installation and removal are required.

2-21.5.4.4 Information concerning severe corrosion, its location, extent, and treatment required or accomplished.

2-21.5.4.5 All circumstances regarding accidents or incidents. The extent of damage and repairs accomplished.

2-21.5.4.6 Significant maintenance action and circumstances involving emergency maintenance accomplished by depot, Engineering, and Installation (E-I) or contractor maintenance personnel.

2-21.5.4.7 Maintenance action performed that may have historical value to a unit gaining the equipment i.e., chronic maintenance problems and all equipment rehabilitation actions. The replacement of work unit coded subassemblies may be recorded if considered historical significance.

2-21.5.4.8 Time Compliance Technical Order (TCTO) actions, when not under the mechanized system (TO 00-20-4. Section II).

2-21.5.4.9 An annual review of historical records will be conducted on AFTO FORM 95 to indicate that they are accurate and current.

2-22 SUPPORT AND TRAINING EQUIPMENT INSPECTION SYSTEM.

2-22.1 Maintenance inspection requirements and accomplishment intervals for powered AGE and training equipment are identified in applicable inspection manuals, workcards or checklists. Item and system managers are responsible for evaluating the inspection requirements and insuring published guidance is available. Inspection criteria for items of SE and training equipment for which no inspection requirements are published will be determined by the major command or the major command may delegate this responsibility to the local level. Inspection criteria should be based on sound maintenance practices and should be designed to assure that SE and training equipment is properly serviced and safe for use prior to dispatch or operation. (The interval for inspections is dependent on the usage, location, and design of the item). The responsibility for safe operation of Air Force equipment rests with the using activity regardless of the requirements established by higher authority. The inspection system consists of the following inspections which will be accomplished by the SE and trainer workcenter having possession of the equipment. These inspections will be documented on Part III of AFTO FORM 244 except for operators inspection which is optional, and service inspections, which are documented on Part II.

2-22.1.1 SERVICING INSPECTION. This inspection is basically an equipment condition inspection outlined by equipment workcards. This inspection will be accomplished in conjunction with equipment servicing, following major/minor maintenance (except bits and pieces and/or hardware that do not affect serviceability) or prior to placement on the ready-line, as a command option, it may also be required prior to placement in a dispatch pool/sub-pool. Each inspection will be documented on an AFTO FORM 244/245.

2-22.1.2 OPERATOR INSPECTION. This inspection is applicable to all SE including training equipment and is accomplished to insure serviceability and safety of the equipment prior to use. It consists of a review of the forms for current status, and a visual inspection of the equipment for defects and adequate servicing. The operator inspection is the responsibility of the user. The operator inspection may be documented at the option of the major command, however, defects discovered will be recorded in the applicable forms.

2-22.1.3 SPECIAL INSPECTION. Special inspections for SE including powered or non-powered AGE and training equipment are prescribed in the applicable inspection workcards. Special inspections of a one-time or short duration nature may also be directed through TOs TCTOs, major command or local directives.

2-22.1.4 PERIODIC INSPECTION AND SCHEDULED LUBRICATION. The periodic inspection and lubrication requirements are accomplished upon accrual of specified operating power-on hours, or at expiration of a calendar period. Scheduled lubrications requirements that are separate from scheduled inspections will be recorded. These requirements are included in the applicable inspection manuals or workcards. Inspection and maintenance intervals specified in T.O.s, checklists, and workcards for support equipment (including powered and non-powered AGE) are maximum intervals during which the affected equipment may remain in service without performing the required inspections or maintenance. With the exception of items whose performance can rapidly degrade with time (such as batteries), inspection or maintenance must be performed on or before the end of the appropriate anniversary month for the interval specified. For example, a 30-day or monthly inspection accomplished on 7 March must be performed again on or before 7 March unless a waiver is approved by GP/CC; a 90-day, 3-month, or quarterly inspection accomplished on 7 March must be accomplished on or before 7 June unless a waiver is approved by GP/CC; a 180-day, 6-month, or semiannual maintenance action accomplished on 7 March must be performed again on or before 7 September unless a waiver is approved by GP/CC; a 365-day, 12 month, or annual inspection accomplished on 7 March must be performed again on or before 7 March of the following year unless a waiver is approved by GP/CC. Items such as batteries must have maintenance or service actions performed at intervals equal to or less than the stated number of days.

NOTE

When SE is designated as war reserve material (WRM) or mobility equipment, comply with paragraph 2-22.1.7. When SE is placed in storage, comply with TO 35-1-4, paragraph 2-3, in lieu of calendar inspections. If more frequent or detailed storage inspection requirements are necessary, so designate on applicable inspection manuals, workcards, checklists as a major command supplement to this TO. See paragraph 2-21.1 of this TO for further guidance.

2-22.1.5 ACCEPTANCE INSPECTION. An acceptance inspection will be performed on all newly assigned equipment. The receiving custodian is responsible for assuring that this inspection is sufficiently thorough to determine the equipment's serviceability and the condition of the equipment documents.

2-22.1.6 TRANSFER INSPECTION. When equipment is transferred, the transferring organization will accomplish inspections necessary to assure that the equipment is operational, has not exceeded the uniform repair/replacement criteria, and that the equipment and documents are complete. If more then seventy-five percent of the inspection interval has elapsed since the last periodic inspection, the transferring organization will accomplish the next inspection due. Certification of completion of the transfer inspection will be entered on Part V of the AFTO FORM 244. TO 35-1-4 contains minimum requirements for preparation of SE to be stored or shipped. Individual equipment TOs specify further detailed requirements.

2-22.1.7 WRM/MOBILITY INSPECTION. Perform all inspections on SE to be included in war reserve material (WRM) or mobility kits prior to storage. Re-inspect at 18 months on equipment kept outside and up to 24 months on equipment kept inside.

2-22.2 SUPPORT EQUIPMENT DOCUMENT ADMINISTRATION. The supervisor is responsible for the status and condition of the equipment as indicated on the AFTO FORM 244, AFTO FORM 245 and AFTO FORM 95. However, when user-operator and maintenance responsibilities are divided among two or more workcenters or organizational units, command or local directives will be established to designate forms maintenance responsibilities. When AFTO forms are located on the equipment, they will be kept in a waterproof envelope, container or compartment and will be readily available to user and maintenance personnel. However, at the option of the major commands, the forms may be maintained in a specific separate file when use or size of the equipment makes it hazardous or impractical for the form to accompany the system or equipment. When the form is closed out, it will be forwarded to the documentation section for filing disposition as prescribed in AFI 21-101, AFI 21-109 and TO 00-20-1, Chapter 2.

NOTE

AUTOMATED FORMS. Major commands may direct the use of automated products in lieu of the AFTO FORM 244 and AFTO FORM 245. As a minimum, the automated products will contain the same data elements as described in the AFTO forms above. Units under the CAMS or GO81 will refer to the applicable user manuals for documentation procedures.

2-22.2.1 The person discovering a discrepancy will make the appropriate entries on the AFTO FORM 244, Part V, and AFTO FORM 245 as applicable. If the discrepancy renders the equipment inoperative or unsafe, the equipment will be removed from service and its condition promptly reported.

2-22.2.2 Discrepancies that are discovered on SE or trainers which do not impair the operation or use of the equipment will either be corrected by the SE repair activity, owning workcenter, or trainer maintenance personnel during the inspection, or an entry for the discrepancy placed in the maintenance record. Delayed discrepancies will be recorded in accordance with MAJCOM Directives.

2-22.2.3 Standard Air Force material used as ground instructional equipment and either maintained in this original configuration or modified in accordance with time compliance technical orders for operational equipment will have maintenance accomplishment documented in accordance with instructions for the like operational equipment. When discovered, Lode "L " will be used to identify that the maintenance pertains to operational equipment used in a training environment. When applicable, time compliance technical orders will be documented in accordance with TO 00-20-2. Training equipment is categorized for documentation and management purposes. Refer to AFI 21-101 and TO 00-20-1 for these categories.

2-22.3 WARRANTY ITEMS. Warranty items that fail within the warranty period will be processed accordance with TO 00-35D-54.

2-22.4 UNSAFE MECHANICAL CONDITIONS OR MATERIEL FAILURES. When an unsafe mechanical condition or materiel failure is discovered on support or training equipment, and it can be reasonably assumed that this condition may exist on other units of the same mission and design, the following action will be taken by the GP/CC or higher authority.

2-22.4.1 Immediately restrict from further use, all units of the same mission and design, and accomplish an inspection to determine if the condition exists on these units. AF FORM 1492 will be used to identify unsafe equipment (AFOSH STANDARD 127-45).

2-22.4.2 When warranted, submit a materiel deficiency report in accordance with TO 00-35D-54.

2-22.4.3 The support equipment or training equipment having the deficiency will remain restricted from use until corrective action is taken or definite instructions are received from the SM and/or the major command.

CHAPTER 3

AFTO FORM 781 SERIES

3-1 GENERAL PURPOSE OF AFTO FORM 781.

Use the AFTO FORM 781 series collectively to provide a maintenance, inspection, service, configuration, status, and flight record for the particular weapon system or support system for which they are maintained. Supervisors will ensure that current forms are being used, and entries on these forms are accurate and current. Prior to flight, the aircraft commander will review the AFTO FORM 781 series for aircraft status. Prior to maintenance, technicians will review the AFTO FORM 781 series forms. These forms are designed for use in a clear vinyl plastic binder. Substitute binders are permitted but must be standardized at unit level.

3-2 AIRCREW TRAINING DEVICE (ATD) FORMS.

3-2.1 The AFTO FORMS 781, 781A, 781F, 781H, 781K and AFTO 781B and/or 781L as needed, are mandatory for ATDs in the 6930 Federal Stock Class (FSC). Accomplish documentation for visual systems listed in FSC 6930 on the forms of the simulator to which they are attached. MAJCOMs have the option of using other 781 series forms with the FSC 6930 ATDs, and all 781 series forms with other ATDs.

3-2.2 When documenting the AFTO 781 series forms, precede the mission, design and series (MDS) of the aircraft being simulated by the letter "S" to denote a specific aircraft ATD MDS.

3-3 ARRANGEMENT OF FORMS WITHIN THE BINDER.

3-3.1 The AFTO FORMS 781, 781A, 781F, 781G, 781H, 781J, 781L, and 781M are **mandatory** for aircraft and are maintained in the aircraft forms binder. Use of all remaining AFTO FORM 781 series forms are a MAJCOM option. The following arrangements will be used.

3-3.1.1 The AFTO FORM 781F serves as identification for the binder for a particular aircraft and as a source document for obtaining billing information for fuel and oil issues. Insert this form in the front cover of the binder. Use two copies if a stiffener is used for the binder covers.

3-3.1.2 Insert the AFTO FORM 781G which contains basic information to serve as an aid in making entries on the AFTO FORM 781, in the rear cover of the binder. Use two copies if a stiffener is used for the binder covers.

3-3.1.3 The AFTO FORM 781M which contains basic information to serve as an aid in making entries on the AFTO FORMS 781A and 781K is inserted in a clear vinyl page holder and placed at the rear of the binder.

3-3.1.4 The AFTO FORM 781N is an active aircraft form and is maintained (arrangement optional) in the 781 binder for aircraft equipped with the J-79 engine. Complete the 781N in accordance with the TOs referenced in the form.

3-3.1.5 Arrangement of the remaining AFTO FORM 781 forms within the binder is optional since various combinations can be used conveniently. MAJCOMs may standardize the arrangement of the forms or delegate it to the GP/CC. Dividers, punched to fit the rings of the binder, can be used to separate forms.

3-3.1.6 Maintain the AF FORM 664, Aircraft Fuels Documentation Log in the AFTO FORM 781, AFORM Aircrew/Mission Flight Data Document binder (arrangement optional) in accordance with AFI 23-202. When utilizing the fuel automated system, the AFTO FORM 664 is not required.

3-4 PRIVACY ACT ADVISEMENT FOR THE AFTO FORM 781.

3-4.1 Personnel furnishing personal information for completion of the AFTO FORM 781 are advised of the following information.

3-4.2 Authority. 10 U.S.C. Section 8012; Executive Order 9397, 22 Nov. 43. Authority. 10 U.S.C. Section 8012; Executive Order 9397, 22 Nov. 43.

3-4.3 Principal Purpose. The AFTO FORM 781 is the source document for recording individual flying time, sorties and/or events for input into the maintenance data system (G081/CAMS) and flying hour reporting system (AFORMS).

3-4.4 Routine Uses:

3-4.4.1 Validates accomplishment of mandatory flying requirements needed to attain or maintain professional standards.

3-4.4.2 Validates air crew flying hours to authorize payment of flying incentive pay.

3-4.4.3 Provides a basic record of each flight of USAF aircraft, reason for mission, duration, crew members, and duty positions.

3-4.4.4 Used as a source document by maintenance for determining the number of hours of operating time on airframes and power plants.

3-4.5 Disclosure is mandatory and the effect on an individual for not providing information could result in loss of records with consequent loss of professional qualification and incentive pay entitlements.

3-5 DOCUMENTING OPERATIONAL CHECKS AND FUNCTIONAL CHECK FLIGHTS.

3-5.1 Functional check flights and operational checks, which must be performed in accordance TO 1-1-300 and the applicable -6 scheduled inspection and maintenance requirements manual, will be entered on the AFTO FORM 781A and documented as follows:

3-5.1.1 OPERATIONAL CHECKS. When required, an operational check will be part of the maintenance action. Document in the "CORRECTIVE ACTION" block by including a statement such as "OPS CK OK." If a malfunction is detected during the operational check, document the finding (for example, sign off the write-up as "OPS CK BAD") and refer to a new write-up documenting the malfunction under the appropriate symbol.

3-5.1.2 In the event that the operational check cannot be accomplished concurrently with or immediately after completion of the maintenance, close out the original entry by describing the corrective action with a statement that an operational check is required. When this situation occurs, record the prescribing TO number and make a new entry for the operational check in the next open block on the AFTO FORM 781A.

3-5.1.3 The original entry and the operational check entries must refer to each other by entering "see page number and item number." The operational check entry must adequately describe the reason for the operational check with the prescribing TO number recorded.

3-5.1.4 When an in-flight operational check is required to verify or supplement a ground check and does not involve an FCF, make an AFTO FORM 781A entry to describe the type and extent of the check needed.

3-5.1.5 When an in-flight operational check is completed, enter the remark "OPS CK OK" in the "CORRECTIVE ACTION" block. Place the last name initial of the individual who completes the operational check over the symbol in the SYM block and their signature entered in the "INSPECTED BY" block.

3-5.2 FUNCTIONAL CHECK FLIGHTS. Enter an appropriate statement to indicate the reason for which the FCF is being accomplished in the "DISCREPANCY" block.

3-5.2.1 Record discrepancies encountered during an FCF on the AFTO FORM 781A.

3-5.2.2 Record discrepancies noted during an FCF performed by depot facility personnel on depot work documents; however, when this option is taken, the AFTO FORM 781A will contain a statement reading: "FCF defects recorded on _____" (enter the form identification).

3-5.2.3 After the required depot work is completed, sign off the AFTO FORM 781A entry as "Reported defects cleared on" (enter form identification) and enter appropriate signatures in the "CORRECTED BY" and/or "INSPECTED BY" blocks. Ensure copies of depot documentation reflecting discrepancies and corrective action accomplished by depot facilities during pre-flight and functional check flights accompany the aircraft being returned to the owning command. These documents will be filed in the historical file and disposed of in accordance with AFMAN 37-138.

3-5.2.4 After completion of the FCF, if the aircraft is released, enter the following statement in the "CORRECTIVE ACTION" block, "FCF completed, aircraft released for flight."

3-5.2.5 If a check flight was performed to complete a scheduled inspection and it fulfills all of the inspection requirements, document the scheduled inspection completion on the AFTO FORM 781A and the change in inspection status on the AFTO FORM 781K. Change this inspection status upon completion of the FCF that fulfills all of the inspection requirements. If subsequent check flights are required for non-inspection requirements, charge these discrepancies to the specific equipment requiring the functional check flight.

3-5.2.6 The pilot who accomplishes the FCF will initial over the symbol in the "SYM" block and enter his/her signature in the "INSPECTED BY" block.

3-5.2.7 To eliminate duplication of FCF entries, utilize the original FCF AFTO FORM 781A entry for additional check flights when the original condition or maintenance work requires further testing.

3-5.2.8 If a condition occurs during the FCF requiring another FCF after the maintenance work is completed, make a new entry on the AFTO FORM 781A for the new discrepancy.

3-6 RECORDING ENGINE STORAGE.

When installed engines are placed in storage, make entries on the AFTO FORM 781A to indicate the type of storage and which portions of TO 2R-1-11 or 25-1-18 have been complied with. Examples: engines in temporary storage, TO 2R-1-11, sect...., par...., CW or engine in 1 to 30 days storage, TO 2J-1-18, sect...., par..., CW. When the engines are removed from storage status, record a reference to the de-preservation instructions that were used in the "CORRECTIVE ACTION" blocks.

3-7 PROCEDURES FOR TRANSFER OF DATA BY DEPOT/CONTRACTOR FACILITY.

3-7.1 When aerospace vehicles (including depot assigned test project aerospace vehicles) are being processed by a depot facility and all AFTO FORMs 781A and 781K entries are transferred to depot work documents, enter a statement reading, "All preceding uncleared entries transferred to (enter form identification)" after the last entry on both the AFTO FORMs 781A and 781K. Follow the statement with the date and signature of a production inspector or a representative of the depot documentation activity. AFTO FORM 781 series may be used as depot forms.

3-7.2 The depot work documents will contain, (1) a listing of all uncleared discrepancies that appear on the maintenance documents which accompany the aerospace vehicle, (2) a listing of TCTOs that are scheduled for accomplishment and (3) an identification of any special requirements or special projects. Document all work performed by depot personnel on applicable depot work documents.

3-7.3 When all work is completed, initiate a new AFTO FORM 781 series for the return shipment that reflects current status information.

3-7.4 When new AFTO FORMS 781 series are initiated, return the old ones with the aerospace vehicle and file them in the historical file located in the documentation activity of the unit possessing the aerospace vehicle. Return a copy of AFTO FORM 95 to the owning unit with the following: part numbers and serial numbers for all serially tracked items and include Date of Manufacture (DOM) and Date of Installation (DOI), TCTOs, time changes, an Equipment Transfer Report (if available), special or scheduled inspections (with the date and aircraft time they were accomplished), and any other significant information. All serially controlled items, warranty items, TCIs, and inspections will be entered into REMIS prior to transfer.

3-8 CAMS FOR AIRLIFT (G081)/CORE AUTOMATED MAINTENANCE SYSTEM (CAMS) PLANNING REQUIREMENTS FOR TRANSFER.

3-8.1 Units possessing G081/CAMS capability will use automated products.

3-8.2 Always forward two copies of the automated products with an aircraft, engine, or engine module which is being transferred to a depot for PDM, MOD or ACI. Forward both copies of the automated products to the depot aircraft or engine records section. The aircraft or engine records section ensures all information which affects the aircraft, engine or engine module historical records, such as accessory and time change items, is documented on both copies of the automated products. Line through old entries in red. Enter new entries immediately below the old entries.

3-8.3 When all pertinent aircraft, engine or engine module historical information has been documented on the automated products, the aircraft or engine scheduling branch chief certifies that all entries are complete by signing both copies of the report. Return one copy of the signed report to the unit of assignment and retain the second copy in the depot aircraft or engine records section for 180 days.

3-8.4 When the aircraft, engine or engine module (as applicable) returns to the unit of assignment, forward the certified automated products to the aircraft or engine records section where the CAMS data file will be updated based on the information provided by the automated products.

3-8.5 Units may use the Mass File Transfer system in lieu of the automated products when transferring aircraft to another CAMS-equipped unit. Establish local procedures for Maintenance Systems Analysis to coordinate with the host data processing installation to obtain the transfer media.

3-9 AFTO FORM 781 ENTRIES.

3-9.1 The aircraft commander completes blocks 1, 6 through 33 and 35 in accordance with AFI 11-401.

3-9.2 Unit Operations will complete block 36 in accordance with AFI 11-401, Flight Management.

3-9.3 The AFORMS input operator will complete block 37 in accordance with AFI 11-401.

3-9.4 Maintenance personnel, flight crew, trainer technician/operator, or debriefing personnel complete blocks 2 through 5, and 34 as follows.

3-9.4.1 Block 2, "MDS." Enter the mission, design and series (MDS) designators from block 12 of the AFTO FORM 781F, Aerospace Vehicle Flight Report and Maintenance Document.

3-9.4.2 Block 3, "SERIAL NUMBER." Enter the aircraft serial number. Example: 85-1428, 64-14828.

3-9.4.3 Block 4, "Unit CHARGED FOR FLYING HOURS." Enter the organization to which the aircraft is possessed, with the command designation in parenthesis. (Example: 374 AW (AMC).) Enter the four-letter code of the Host Operation System Management (HOSM) which services that organization, (supplied by the unit operations officer) to which the original forms must be sent for processing and filing.

3-9.4.4 Block 5, "LOCATION." Enter the base to which the aircraft is assigned.

3-9.4.5 Block 34, "MAINT. REVIEW." Maintenance personnel at debriefing initial this block to show the form was reviewed and the data was entered into G081/CAMS, as required.

3-10 AFTO FORM 781, AFORMS AIRCREW MISSION FLIGHT DATA DOCUMENT (FIGURES 3-1 AND 3-2).

3-10.1 The AFTO FORM 781 is the source document for logging flight activity for individuals authorized to take part in a mission. This form provides input to G081/CAMS and the Air Force Operations Resource Management System (AFORMS) flying time interface. Maintenance personnel and the aircraft commander (A/C) are jointly responsible for completion of this form.

3-10.2 All maintenance personnel or aircrew trainer technician/operator will assure that sufficient copies of the AFTO FORM 781 are aboard the aircraft or available at the ATD. These forms will have blocks 2 through 5 completed and in a quantity that will satisfy mission requirements.

3-10.3 The aircraft commander will properly date and complete the AFTO FORM 781 to show all pertinent flying data and flying time for all personnel authorized to participate in the flight. After completion of the flight, he or she will initial block 36 of the form.

3-10.4 Remove the completed AFTO FORM 781 from the aircraft forms binder and enter data into the automated maintenance management system at maintenance debriefing. Send to either unit operations or maintenance plans and scheduling (MAJCOM option).

3-11 AFTO FORM 781A, MAINTENANCE DISCREPANCY AND WORK DOCUMENT (FIGURES 3-3 AND 3-4).

3-11.1 Use the AFTO FORM 781A to document each discrepancy discovered by aircrew or maintenance personnel

3-11.1.1 Discrepancies resulting from battle damage will not be documented on the 781A, TO 1-1H-39, General ABDR technical manual, contains specific instructions on documenting aircraft battle damage repairs.

3-11.2 Download the C-17 Aircraft Diagnostics and Integrated Test System (ADITS) to disc and process during aircraft debriefing, the local GP/CC and MAJCOM must approve, in writing, any deviations. For aircraft that are equipped with Aircraft Integrated Data Systems (AIDS), such as the C-5 maintenance analysis detection and recorder subsystem (MADARS), recording of malfunctions detected by the airborne automatic checkout equipment on the AFTO FORM 781A is not required unless directed by the MAJCOM or GP/CC. At the completion of each flight, the flight engineer will manually interrogate the computer for a summary printout of the malfunctions detected on all monitored items. Attach the summary printout to the AFTO FORM 781A (upon termination at the home station only) even though the defects may be recorded on the form.

3-11.3 Maintenance personnel or aircrew trainer technician will be responsible for the following.

3-11.3.1 Assuring sufficient copies of the AFTO FORM 781A are available for the entire mission.

3-11.3.2 Transcribe open discrepancies to a new AFTO FORM 781A, remove the AFTO FORM 781A from the binder, and forward removed forms to the work center office. After the responsible flight supervisor reviews and ensures the entries are current and accurate, forward the AFTO FORM 781A to the documentation activity for filing (Maintain ATD AFTO FORM 781As at the work-center). Ensure automated systems are updated IAW 21-101 and 00-20-series TOs.

3-11.4 Complete the heading entries for the AFTO FORM 781A as follows:

NOTE

Minimum heading requirements for double-sided AFTO FORM 781A forms will be: (1) From, To, MDS, Serial Number, Page, and Of Pages on page one. (2) Page number on all even numbered pages. (3) Serial Number and page number on all remaining odd numbered pages. When single-sided forms are used the minimum heading requirements are (1) From, To, MDS, Serial Number, Page and Of Pages on page one. (2) Serial Number and Page number on all remaining pages.

3-11.4.1 "FROM." Enter the date the form was initiated. Example: 20000419.

3-11.4.2 "TO." Enter the date the form was closed out and removed from the binder. Example: 20000420.

NOTE

The "FROM" date represents the date the form was initiated and the "TO" date, represents the date the form was closed out and removed from the aircraft forms binder. The "FROM" date of a new form will always be the same as the "TO" date on the form that is closed out. This entry provides a positive means of determining whether any forms are missing from the aircraft file. Securely fasten all forms together to prevent loss.

3-11.4.3 "MDS." Enter the aerospace vehicle mission, design, and series designator. Example: C-130H.

3-11.4.4 "SERIAL NO." Enter the aerospace vehicle serial number. Example 85-1428, 64-14828.

3-11.4.5 "PAGE." Enter the page number. On two-sided forms the front and back of the form will be considered as separate pages and will be numbered accordingly.

3-11.4.6 "OF _____ PAGES." When closing out a set of forms enter the total number of pages on page one only. Example: Page 1 of 8 Pages.

3-11.4.7 "SYM BLOCK." Enter the proper symbol of each discrepancy documented. Entries in this block will never be erased, even if entered in error.

3-11.4.7.1 When a discrepancy is corrected, place an initial over the symbol. The individual who performs or supervises the corrective action initials over the Red Dash or Red Diagonal symbol. If the defect carried a Red X symbol, a production inspector designated to clear Red X symbols, must inspect and sign off the "INSPECTED BY" block. Specific instructions for clearing Red X symbols are contained in TO 00-20-1, Chapter III. When any corrective action involves more than one work-center, personnel having the primary responsibility for repair will not initial over the symbol on the AFTO FORM 781A until all participating work-center personnel have completed and documented their work.

3-11.4.8 "JCN." Maintenance personnel or aircrew trainer technicians ensure the job control number when assigned is entered.

3-11.4.9 "DATE DISC." Aircrew or maintenance personnel will print the date discovered.

3-11.4.10 "DOC NO." Maintenance personnel or aircrew trainer technicians ensure the supply document number, if part(s) is back-ordered, is entered.

3-11.4.11 "CF 781A," "XF 781K." When a new AFTO FORM 781A is initiated, uncorrected discrepancies will be carried forward to a new AFTO FORM 781A and discrepancies other than Red X items may be transferred to the AFTO FORM 781K.

NOTE

Downgraded Red Xs will never be transferred to the AFTO FORM 781K.

3-11.4.11.1 "CF 781A." When a discrepancy is carried forward to a new AFTO FORM 781A, the individual transcribing the discrepancy will place a cross (X) in the CF 781A box. Transcribe the SYM, JCN, original date discovered, discrepancy and, if applicable, the supply document number. The individual transcribing the discrepancy will print the name and employee number of the individual who made the initial entry.

3-11.4.11.2 "XF 781K." If the discrepancy is to be transferred to the AFTO FORM 781K, place a cross (X) in the XF 781K box. Transcribe the SYM, JCN, original discrepancy and, if applicable, the supply document number.

3-11.4.11.3 Do not place an initial over the symbol for the discrepancies that are carried forward or transferred to another form since this only represents a transcribing action and does not correct the reported condition.

3-11.4.12 "DATE CORRECTED." Enter the date discrepancy is corrected.

3-11.4.13 "WUC/REFERENCE DESIGNATOR (MAJCOM option)." Use this block, if applicable, to document Work Unit Code information or the appropriate Reference Designator (C-17). The WUC consists of five alpha-numeric digits and the REF DES consists of nine alpha-numeric digits. They are used to identify line replaceable units.

3-11.4.14 "FAULT CODE (MAJCOM Option)." Use of this block applies to those weapon systems that use fault codes to aid in troubleshooting. The "FAULT CODE"code is computer generated and describes a system malfunction which cross references to a narrative or troubleshooting procedure in the maintenance technical order for the given weapon system (aircraft) or system.

3-11.4.15 "STA CODE." Use this block for any corrective action accomplished away from home station and maintenance is performed by other than home station personnel. Enter the four-letter geographic location (GEO-LOC) indicator for the location where the repair was accomplished. The GEO-LOC will be entered at the time the discrepancy is corrected. GEO-LOC Codes are located in REMIS/CAMS/GO81. EXCEPTION: Do not include the GEO-LOC or Station Code information for aircraft on classified missions.

3-11.4.16 "DISCREPANCY."

3-11.4.16.1 Prior to entering new discrepancies, review the forms to prevent duplication. If a previous discrepancy is considered to be more serious than represented, it should be upgraded (TO 00-20-1, chapter III).

3-11.4.16.2 Aircrew or maintenance personnel will print a thorough description of the discrepancy in the next open block.

3-11.4.16.3 Aircrew/maintenance personnel will enter all defects noted before, during, and after each flight. They will not, under any circumstances, enter more than one defect in each block. EXAMPLE: A system problem reported by an aircrew member would be one discrepancy. All subsequent maintenance performed such as equipment removal/installation and panel/door removals would be considered separate discrepancies and would be documented separately using the appropriate red symbol. All panel/door removals will be entered as a separate individual discrepancy. If panels/doors are removed as part of troubleshooting and/or repair of another discrepancy, reference will be made to the original discrepancy by using the see page, item format. Multiple fastener access doors (non-quick access) that are opened will be documented as a separate discrepancy. EXCEPTION: Multiple panel/door removals (except those requiring IPIs) may be grouped into one discrepancy as a local GP/CC option. All panels/doors removed must be listed individually within the discrepancy or on an approved panel list.

3-11.4.16.4 Whenever a Red X discrepancy is of a nature that operation of the affected system under any circumstances would be hazardous or result in further damage or injury to personnel, include a warning note following the discrepancy statement. For example: "NOTE - DO NOT apply electrical power to fuel system or operate engine - FIRE HAZARD." Enter the word "NOTE" and remarks in red or underlined in red. When the condition that created the note no longer exists, line through the note.

NOTE

The word "NOTE" will NEVER be written in the "SYMBOL" block. When required, only the applicable red symbol will be entered in the "SYMBOL"block to denote the seriousness of the entry.

3-11.4.16.5 When a maintenance action is stopped prior to completion, enter the specific steps not accomplished in the AFTO FORM 781A. MAJCOMs may provide additional guidance for incomplete maintenance documentation.

3-11.4.16.6 Certain entries are required to assure adequate inspections of affected system components are made to prevent or reduce the possibility of future mishaps. The individual having initial knowledge of the occurrence regardless of the apparent condition of the aircraft will make these entries. Make a brief entry in the "DISCREPANCY" block when an aircraft has:

3-11.4.16.6.1 Made a barrier arrestment/engagement.

3-11.4.16.6.2 Been involved or damaged in ground or air mishap.

3-11.4.16.6.3 Encountered severe turbulence or icing during flight.

3-11.4.16.6.4 Made contact with a foreign object.

3-11.4.16.6.5 Exceeded the airspeed or "G" limitations.

3-11.4.16.6.6 Made a hard landing.

3-11.4.16.6.7 Used excessive braking action.

3-11.4.16.6.8 Flown sustained flights below 3000 feet over salt water.

3-11.4.16.7 A required special inspection, accessory replacement, operational check or functional check flight is due or a scheduled inspection (Pre-flight, PR/BPO, BPO, Thru-flight, etc.) is overdue.

3-11.4.16.8 Record discrepancies discovered during scheduled inspections on AFTO FORM 349s or locally developed lists. Locally developed list and/or AFTO FORM 349s used to record discrepancies discovered during scheduled inspections will be routed with the 781 series forms package, reference paragraph 3-11.3.2. Only Red X entries will be required on the AFTO FORM 781A. MAJCOMs have the option of using locally developed lists to record the removal of panels required by an inspection as long as an entry is made in the AFTO FORM 781A which reflects its use. This will preclude a separate Red X entry for each panel. Transcribe discrepancies, other than Red X conditions, discovered during scheduled inspections, that cannot be corrected by the allotted scheduled inspection time to the AFTO FORM 781A or may be transcribed directly to the AFTO FORM 781K.

3-11.4.16.9 Any Equipment removed to correct a discrepancy or to Facilitate Other Maintenance (FOM), which would cause a grounding or unsafe condition if not reinstalled, will be documented as a separate discrepancy with the appropriate red symbol entry. This applies even if the item is immediately reinstalled. This includes all equipment removed to troubleshoot and/or repair another discrepancy. Reference will be made to the original discrepancy by using the see page, item format. EXCEPTION: Procedures that call for the removal of an equipment item to FOM as a step of the task and contain all of the steps for equipment removal/installation within the same procedure, do not need to be documented separately.

3-11.4.16.10 Identify Repeat/Recurring discrepancies by entering in red "Repeat/Recurring" in the "DISCREPANCY" block.

3-11.4.16.11 When oil dilution is used for cold weather operation or engine desludging purposes, record the duration of each oil dilution in the "DISCREPANCY"block.

3-11.4.16.12 An entry for type and quantity of munitions loaded will be a MAJCOM option.

3-11.4.17 "DISCOVERED BY." Aircrew/maintenance personnel will print their first name initial and last name for each discrepancy recorded.

3-11.4.18 "EMPLOYEE NO." Maintenance personnel will enter their employee/FAA certification number. This block is a MAJCOM option for aircrew.

3-11.4.19 "CORRECTIVE ACTION." When the write-up listed on the AFTO FORM 781A is cleared, document a description of the corrective action. For Red X discrepancies include technical order reference or equivalent, in the "CORRECTIVE ACTION" block and enter the date in the "DATE CORRECTED"block. MAJCOMs may specify additional minimum TO reference.

3-11.4.19.1 When a temporary/partial repair is accomplished that warrants changing the symbol entered for the discrepancy, and the final repair action is deferred, enter the temporary/partial repair corrective

action. Close out the original discrepancy and enter a new discrepancy, with the appropriate symbol and description of the work to be accomplished, the next open block of the AFTO FORM 781A. The original entry "CORRECTIVE ACTION" block and new entry "DISCREPANCY" block must refer to each other by the entries "see page __, item __." Units with automated forms will reference the original job control number in the "DISCREPANCY" block of the new entry.

3-11.4.19.2 AFTO FORM 781A entries for the unscheduled replacement of time change items accomplished away from home station will include the items' serial number and previous operating time. Underline these entries in red so they will be readily apparent to the individual posting the information.

3-11.4.19.3 To clear a previously complied with (PCW) discrepancy, the transcriber will print in the "CORRECTIVE ACTION" block on the new set of forms "PCW. See forms dated FROM ____ To ____ (from the old forms), Page ___, Item ___." Then print minimum signature information of the transcriber. If the discrepancy is a Red X, the transcriber will follow the same steps for the "INSPECTED BY" block as for the "CORRECTED BY" block. The transcriber will place their initial over the symbol.

3-11.4.19.4 Deleted.

3-11.4.20 "CORRECTED BY," "INSPECTED BY" and "EMPLOYEE NUMBER."

3-11.4.20.1 When a Red diagonal entry in the "DISCREPANCY" block has been corrected, enter the maintenance person's minimum signature in the "CORRECTED BY" and "EMPLOYEE NO." blocks.

3-11.4.20.2 When a Red dash entry in the "DISCREPANCY" block has been corrected, enter the maintenance person's minimum signature in the "INSPECTED BY"and "EMPLOYEE NO." blocks.

3-11.4.20.3 If an inspection by a production inspector is required (as in the case of the Red X or local requirements), the maintenance personnel clearing the discrepancy will enter their signature, and employee/ FAA certification number in the "CORRECTED BY"and "EMPLOYEE NO." blocks and the production inspector will enter minimum signature in the "INSPECTED BY" and "EMPLOYEE NO." blocks.

3-12 AFTO FORM 781B, COMMUNICATIONS SECURITY (COMSEC) EQUIPMENT RECORD (FIGURE 3-5).

3-12.1 This form is designed to provide COMSEC equipment status. Maintenance personnel remove the completed AFTO FORM 781B and dispose of in accordance with AFI 37-138. In the case of transient aircraft, retain completed forms in the binder until the aircraft returns to the home organization. The aircraft commander or designated crew member checks the AFTO FORM 781B prior to flight to ascertain that the COMSEC equipment configuration conforms to the mission requirements. Maintenance personnel will ensure the validity and legibility of all required entries.

3-12.2 The following form entries are required:

3-12.2.1 Complete the heading with the appropriate aircraft and date information.

3-12.2.2 "ITEM." Enter the nomenclature of the equipment installed.

3-12.2.3 "SERIAL NUMBER." Enter the serial number of the COMSEC equipment item.

3-12.2.4 "POSITION."Enter the position number of the item. Examples: KY-28 number five, enter a 5; KIR-1A number two, enter a 2.

3-12.2.5 "DATE INSTALLED." Enter the date the item is installed. If the installation date is unknown, verify the item is installed and enter the current date.

3-12.2.6 "SIGNATURE AND EMP#." Enter the signature and employee/FAA certification number of the person who installed the item, or verified installation. If the information is transcribed from another AFTO FORM 781B, enter the signature and employee/FAA certification number of the person who transcribes the information.

3-12.2.7 "DATE REMOVED." Enter the date the COMSEC equipment item is removed.

3-12.2.8 "SIGNATURE AND EMP#." Enter the signature and employee/FAA certification number of the person who removed the item, or verified removal.

3-12.3 When all columns have been completely filled in or when columns have been utilized to the extent that initiation of a new AFTO FORM 781B becomes necessary, transcribe all line entries that do not show entries in the date removed block to a new AFTO FORM 781B.

3-13 AFTO FORM 781C, AVIONICS CONFIGURATION AND LOAD STATUS (FIGURES 3-6 AND 3-7).

3-13.1 The form provides avionics configuration and load status and is used when directed by the MAJCOM or GP/CC. Maintenance personnel remove the completed AFTO FORM 781C and dispose of it in accordance with AFI 37-138. In the case of transient aircraft, retain the completed forms in the binder until the aircraft returns to the home organization. When the form is used, the aircraft commander checks the AFTO FORM 781C prior to flight to ascertain that the avionics equipment status and configuration conform to the mission requirements. Maintenance personnel ensure the validity and legibility of all required entries.

3-13.2 The following entries are required:

3-13.2.1 Complete the heading with the appropriate aircraft and date information.

3-13.2.2 "ITEM." Enter the common name of the equipment installed. When the equipment is removed, draw a line through the entry and enter a notation in the "REMARKS" block at the lower portion of the form to indicate that the item was expended or removed.

3-13.2.3 "TYPE AND SIZE." If applicable, enter the type of equipment on the top line and size of the equipment on the lower line.

3-13.2.4 "QUANTITY." Enter the quantity of the item installed.

3-13.2.5 "POSITION." Enter the position where the item is installed. Examples: Left inboard (L inbd), right outboard (R outbd).

3-13.2.6 "COMPARTMENT." If applicable, enter the compartment in which the item is installed.

3-13.2.7 "WEIGHT." Enter the weight of the item.

3-13.2.8 "SYS CHECKED DATE AND TIME." Enter the date and time operational checks were performed prior to or after installation of the equipment. Example: 19970719 will be entered on the top line and 1900 on the lower line to indicate 19 July 1997 at 1900 hours. When a series of consecutive entries are made or checked by the same individual, draw a diagonal line through this column from the first to the last entry, with a single date entry above the line and a time entry below the line.

3-13.2.9 "OPERATIONAL STATUS." Make an entry in this block indicating the item is either operational or non-operational (OP or NON-OP).

3-13.2.10 "SIGNATURE AND EMP#." The maintenance person responsible for the overall condition of the listed item enters signature and employee/FAA certification number. When a series of consecutive entries are made or checked by the same individual, draw a diagonal line through this column from the first to the last entry and initial the line(s).

3-13.2.11 "REMARKS." Use this block to enter explanatory remarks that are pertinent to installations or removals, special precautions and so forth. Follow entries in this block by a signature and employee/FAA certification number, date and time of entry.

3-14 AFTO FORM 781D, CALENDAR AND HOURLY ITEM INSPECTION DOCUMENT (FIGURES 3-8 AND 3-9).

3-14.1 Use the AFTO FORM 781D for listing calendar and hourly inspection items peculiar to the aerospace vehicle or equipment for which space is not available on the AFTO FORM 781K. Use the AFTO FORM 781D separately or in conjunction with the AFTO FORM 781K to provide separate tailored listings for -6 calendar/ hourly items which are applicable to aircraft short term items, aircraft long term items, engine long term items or other special equipment which has numerous -6 items listed. When this option is exercised, stamp or print in bold the following statement on the AFTO FORM 781K: "See AFTO FORM 781D." To facilitate scheduling, the AFTO FORM 781D will normally be maintained in the documentation activity with the AFTO FORM 781E. Insert these forms in the aircraft forms or place aboard the aircraft only when required for TDY or extended cross-country missions. Additionally, if an AFTO FORM 781D is used as an extension of the AFTO FORM 781K, attach it to the AFTO FORM 781K and carry it aboard the aircraft. When this option is used, maintenance personnel are responsible for maintaining the AFTO FORM 781D. Maintain long term items listed on the AFTO FORM 781D in appropriate documentation or scheduling sections for aircraft or, if documentation sections are established in engine or specialized equipment sections, keep the tailored AFTO FORM 781D there.

3-14.2 The following entries are required

3-14.2.1 Maintenance personnel will complete the entire form heading.

3-14.2.2 "INSPECTION ITEM." Enter those items to be inspected or tested at specified hourly or calendar periods. To establish uniformity, list the special hourly and calendar inspection items in appropriate interval groups, in the sequence that they appear in the -6 scheduled inspection and maintenance requirements manual. Use a two-line entry for those items requiring inspection at either an hourly interval or a calendar period. Use one line to indicate the hourly interval and the next line to indicate the calendar time at which the inspection is due. Enter additional items which may be required due to the type of mission, geographical location, or at the direction of the MAJCOM or GP/CC following the listing obtained from the applicable -6 scheduled inspection and maintenance requirements manual. Do not list recurring inspection items that are prescribed on inspection workcards on this form. Document special inspections (e.g., NDI) established to track and re-verify repairs to fracture critical structures. The SM establishes these special inspection requirements and intervals in conjunction with authorizing a repair(s) performed in accordance with the -3 technical order. Document a description of the repair, authority for the repair, location and repairing activity on the applicable AFTO FORM 95.

3-14.2.3 "FREQUENCY." Enter the frequency of the inspection in this column.

3-14.2.4 "NEXT DUE." In the first NEXT DUE column, enter the aircraft hours, engine hours, or date the next inspection is due. Upon completion of the inspection, line out the date or hours reflected in the old "NEXT DUE" column and the new date or hours will be entered in the adjacent "NEXT DUE" column, and so forth.

3-14.3 Transcribe the form as needed and follow disposition instructions in AFI 37-138.

3-15 AFTO FORM 781E, ACCESSORY REPLACEMENT (FIGURES 3-10 AND 3-11).

3-15.1 This form is used to record data to facilitate compliance with replacement requirements and the necessary data for reporting discrepancies when a G081/CAMS/REMIS product is not used. Also use this form to document replacement intervals of the items as specified in the applicable -6 scheduled inspection and maintenance requirements manual, related commodity series TOs and accessories and components of reciprocating and turbojet engines as outlined in TOs 2R-1-16 and 2J-1-24. When this form is used, the documentation activity ensures all required entries are made as outlined in this chapter. Regardless of whether the equipment is serviceable or repairable, keep the AFTO FORM 781E current as long as the aerospace vehicle or equipment is in the possession of the owning activity. On aircraft that have engine events history recording devices installed, compute the elapsed operating time as indicated on the recording device and document it on the AFTO FORM 781E.

3-15.2 Initiate one AFTO FORM 781E for aerospace vehicle accessories, and one for each engine. List the replacement items in the sequence they appear in the applicable -6 scheduled inspection and maintenance requirements manual. Separate these listings into convenient groups. Lines may be left blank after each group to provide space for recording replacement of items listed within that group.

3-15.3 Accessory replacement documents for jet engines (excluding J-69) will include an entry for each main shaft bearing to reflect serial number, manufacturer, part number, location, previous operating time, and the engine time at installation. Do not maintain entries for spark plugs, ignition plugs, and filter elements since the AFTO FORM 781K is more suitable for controlling and documenting the status of replacements of these items.

3-15.4 Use a two-line entry for those items requiring replacement at either the aerospace vehicle or equipment time, or specified cycles, rounds, or a calendar period. Use one line to indicate the aerospace vehicle or equipment time and the next to indicate cycles, rounds, or calendar time, at which the replacement is due. Use ditto marks in columns A, B, and C for the second line of such entries.

3-15.5 Enter additional items required due to the type missions, geographical location, the direction of the MAJCOM or GP/CC following the listing obtained from the -6 scheduled inspection and maintenance requirements manual. When replacements are made, use the next open line to record entries for the newly installed item.

3-15.6 Make a separate entry on the AFTO FORM 781E to reflect complete identification data for each explosive item utilized, such as those employed in aircrew escape systems and external stores jettison systems. Record the following minimum data, the item nomenclature, type, and item serial number, To complete the identification data, make entries in the "LOCATION," "REPLACE EVERY," and "INSTALLED

AT" columns. When subsequent changes of these items are made, make entries in the remaining applicable columns of the form in accordance with the instructions in this section and post new data for the replacement item. Data for small items, such as a blasting cap, fire extinguisher cartridges or squibs, and squib and plate assemblies, are available only on the outer containers. If an explosive device is received as a component of an assembly and the identification data are not attached and the shipping organization cannot furnish the data, the DOM stamped on the item will be used in lieu of the lot number for recording purposes. If the DOI is not known, consider the DOM as the DOI.

3-15.7 There is no requirement for making AFTO FORM 781E entries for impulse cartridges installed in external stores jettison systems when the frequency of installation and removal make it impractical to maintain a current status.

3-15.8 Entries on the AFTO FORM 781E are as follows:

3-15.8.1 "FROM." Enter the date the form was initiated. Example: 20000914.

3-15.8.2 "TO." Enter the date the form was closed out and removed from the binder.

3-15.8.3 "MDS." Enter the aerospace vehicle's type MDS. When an AFTO FORM 781E is used to track engine mounted accessories, enter the engine type in the MDS block.

3-15.8.4 "SERIAL NO." Enter the serial number of the affected aerospace vehicle or engine.

3-15.8.5 "PAGE." When more than one sheet of this form is required, enter the page number and total number of pages.

3-15.8.6 COLUMN A, "NOMENCLATURE AND TYPE." Enter the nomenclature and type of accessory or equipment requiring replacement at a specified interval.

3-15.8.7 COLUMN B, "SERIAL NO." Enter the serial number, normally found on the data plate. If the serial number is not on the accessory, enter "none." When new forms are being prepared to replace lost forms and the serial number cannot be identified without expenditure of excessive man-hours, enter the word "unknown."

3-15.8.8 COLUMN C, "LOCATION." Enter the installed location of the accessory. Leave this block blank when a single installation of the accessory in the aerospace vehicle or engine is involved and the location of the item is obvious.

3-15.8.9 COLUMN D, "REPLACE EVERY." Enter the operating interval or the calendar period at which the accessory or component should be replaced. This replacement time will be found in the applicable -6 scheduled inspection and maintenance requirements manual or related commodity series TOs. When the replacement intervals for items are reduced locally, enclose the entry in this block within parentheses. Also enclose within parenthesis items prescribed locally or by the MAJCOM. Use of the parentheses denotes unique replacement intervals.

3-15.8.10 COLUMN E, "PREVIOUS OPERATING TIME." Enter the previous operating time or usage of the accessory. TO 00-20-1, chapter IV contains specific instructions for computing the previous operating time for accessories having a different replacement time on various aerospace vehicles or engines on which it may be used or when accessories are added to the replacement manual.

3-15.8.11 COLUMN F, "INSTALLED AT." Enter the aerospace vehicle or engine time to the nearest hour, or the calendar date, for items that are changed on an hourly or calendar basis.

3-15.8.12 COLUMN G, "REPLACEMENT DUE AT." Enter the aerospace vehicle or engine time to the nearest hour, calendar date, cycles, or rounds fired when an accessory or item of equipment is due for replacement. This entry will be the maximum allowable operating time of the accessory. For hourly time change items, add the time to the aerospace vehicle or engine hours entered in column F. When an accessory that has not been overhauled prior to installation is being reused, subtract the previous operating time from the maximum allowable operating time.

3-15.8.13 COLUMN H, "REMOVED." Enter the aerospace vehicle or engine time to the nearest hour, cycles, rounds fired, or calendar date at which the accessory or item of equipment was removed. For components requiring replacement based on actual operating time, such as APUs, entries in columns F, G, and H will be in terms of component operating time instead of aerospace vehicle time. Maintain forms for engine mounted accessories in terms of engine operating time.

3-15.8.14 COLUMN I, "TIME ACCUMULATED." Enter the accumulated time, cycles, or rounds fired on the accessory during this installation period. Compute this by subtracting the installation time, cycles, or rounds from the removal time, cycles, or rounds.

3-15.8.15 COLUMN J, "TOTAL OPERATING TIME." Enter the time, cycles, or rounds, the accessory was operated since new or last overhaul. Compute this by adding the accumulated time entry of column I to the previous operating time entry in column E. For example, if an item having 250 hours previous operating time is installed at 550 hours and removed at 1050 hours, the operating time will be 750 hours (column J). Entries for items having only a calendar replacement interval will reflect the calendar period of installation as computed from the date of installation to the date of removal.

3-16 AFTO FORM 781F, AEROSPACE VEHICLE FLIGHT STATUS REPORT MAINTENANCE DOCUMENT (FIGURES 3-12 AND 3-13).

3-16.1 A completed AFTO FORM 781F is always displayed at the front of the AFTO FORM 781-series binder. When an aerospace vehicle is transferred, revise the data and complete a new form. When possession of the aircraft changes from one organization to another, maintenance supervision will ensure that the appropriate data blocks on the form are changed. These codes are required for billing customer's fuel, maintenance cost per flying hour, and consumption factors.

3-16.2 Fill out the AFTO FORM 781F to reflect the requirements of the aircraft. For a trainer, the AFTO FORM 781F will include all but the "MDS" and "SERIAL NUMBER" blocks.

3-16.3 Post entries on the AFTO FORM 781F in bold print in the appropriate blocks in accordance with the following instructions:

3-16.3.1 BLOCK 1, "ID NUMBER." Enter the aircraft identification number.

3-16.3.2 BLOCK 2, "PILOT." Enter the name and rank of the assigned primary pilot, as applicable.

3-16.3.3 BLOCK 3, Blank. Use of this block is a MAJCOM option.

3-16.3.4 BLOCK 4, "STANDARD REPORTING DESIGNATOR" (SRD). Enter the standard reporting designator. The REMIS tables contain a master SRD list.

3-16.3.5 BLOCK 5, "CREW CHIEF." Enter the name and rank of the aircraft dedicated crew chief.

3-16.3.6 BLOCKS 6-8, "ASST CC." Enter the name(s) and grade(s) of the assistance aircraft dedicated crew chief(s).

3-16.3.7 BLOCK 9, Use of this area is a MAJCOM option.

3-16.3.8 BLOCK 10, "DOD ACTIVITY ADDRESS CODE." Enter the DoD activity address code of the base fuels accounts (FP) at the possessing base.

3-16.3.9 BLOCK 11, "CUSTOMER ID CODE." Enter the customer ID code, using the two digit MAJOR COMMAND Code from TO 00-20-2 Appendix B.

3-16.3.10 BLOCK 12, "MISSION DESIGN SERIES." Enter the aerospace vehicle mission, design, and series designator. Example: C-141B. (For ATDs see paragraph 3-2.2.)

3-16.3.11 BLOCK 13, "SERIAL NUMBER." Enter the aerospace vehicle serial number. Example: 85-1428, 64-14828.

3-16.3.12 BLOCK 14, "ORGANIZATION." Enter the designation of the organization to which the aerospace vehicle is assigned. Example: 437 AW.

3-16.3.13 BLOCK 15, "LOCATION." Enter the location of the organization to which the aircraft is assigned. Example: Charleston AFB, SC. Overseas organizations enter their APO/FPO number in this block.

3-16.3.14 BLOCK 16, "STATION CODE." Enter the assigned station code corresponding to the location shown in block 15.

3-16.3.15 BLOCK 17, "SERVICE CAP." Servicing capacities.

3-16.3.16 Enter in line A under "INTERNAL," the total fuel capacity of all internal fuel tanks. Under "EXTERNAL," enter the total fuel capacity of all external fuel tanks. Under "TOTAL," enter the total fuel

capacity of the aircraft. Use the applicable -5 weight and balance TO for total fuel capacity. Do not use the vehicles "usable fuel" capacity on this form.

3-16.3.17 Enter in line B under "EACH ENGINE," the total capacity of each engine oil tank. Under "AUXILIARY TANKS" enter the total capacity of auxiliary oil tanks. Use the applicable engine TO for each engine oil tank capacity.

NOTE

Line out the inappropriate words of the title of lines A and B to reflect the unit of measure that is being used.

3-16.3.18 BLOCK 18, "INV DATA ASSIGNMENT AND POSSESSION." Under the "COMMAND" column, enter on lines "A" the command code for the assignment of the aircraft (e.g., ACC, AMC etc., reference TO 00-20-2 APPEX B) and on line "B" the command code of the command possessing the aircraft. For example, an aircraft may be assigned to ACC but temporarily possessed by AFMC for depot maintenance. Under the "PPIC" column on lines "A" and "B" enter the assignment and possession code for the aircraft. Plans and Scheduling manages AFI 21-103 reporting and is the source for this data.

3-17 AFTO FORM 781G, GENERAL MISSION CLASSIFICATION-MISSION SYMBOLS (FIGURES 3-14 AND 3-15).

3-17.1 The AFTO FORM 781G contains basic information to serve as an aid in making entries on the AFTO FORM 781. File in the rear cover of the binder. Use two copies if a stiffener is used for the binder covers.

3-18 AFTO FORM 781H, AEROSPACE VEHICLE FLIGHT STATUS AND MAINTENANCE DOCUMENT (FIGURES 3-16 AND 3-17).

3-18.1 Use the AFTO FORM 781H to document maintenance status and servicing information to provide a ready reference as to the status of aircraft, ATDs or air-launched missiles. This form also indicates the status and a history of inspections. At home station, remove the AFTO FORM 781H from the binder after the last flight of the specified flying period. When off-station, leave the form in the binder until the aircraft returns to home station.

3-18.2 Prepare a new AFTO FORM 781H prior to the start of the specified flying period the aircraft or ATD is flown, or required to show current status. Update the form, as required, throughout the specified flying period. An authorized individual as outlined in paragraph 3-18.5.7.3.1. checks the aircraft status prior to flight and signs the conditional/exceptional release. When a maintenance person has not signed the conditional/exceptional release, the aircraft commander is responsible for the status check and exceptional release. The aircraft commander will also check the servicing entries recorded in block 13 "SERVICING DATA" to verify that the quantities are adequate for the flight. After each flight, the aircraft commander will complete block 7, "FLIGHT CONDITION DATA." Specific responsibilities are as follows.

3-18.3 The pilot documents the airframe time, full stop landings, total landings, cartridge/JFS starts, and engine cycles in blocks 9, 10, 11 and 12 of the AFTO FORM 781H, at the completion of each sortie and validates this by signing the appropriate line in block 7.

3-18.4 For missile carrier aircraft, the pilot will assure the designated aircrew member posts the missile airframe time and/or engine operating time on individual missile AFTO FORMS 781H carried aboard the aircraft.

3-18.5 AFTO FORM 781H ENTRIES. Complete the form for aircraft and ATDs in the following manner.

3-18.5.1 For ATDs, completion of blocks 1 through 4 and 6 "STATUS TODAY" is mandatory and completion of the exceptional release portion of block 6 and the remaining blocks is a MAJCOM option.

3-18.5.2 BLOCK 1, "FROM." Enter the year, month, and day of the beginning date for the use of this form. Record all dates on the forms by eight digits in the order of year, month, and day. Example: YYYYMMDD, 20000914 for 14 Sept 2000.

3-18.5.3 BLOCK 2, "TO." Enter the year, month, and day of the ending date for the use of this form.

3-18.5.4 BLOCK 3, "MDS." Enter the aerospace vehicle mission, design, and series designator. Example: C-130H. (For ATDs see paragraph 3-2.2.)

3-18.5.5 BLOCK 4, "SERIAL NO." Enter the aerospace vehicle serial number. Example: 85-1500, 64-14828.

3-18.5.6 BLOCK 5, "CERTIFICATION OF PRE-FLIGHT (PR), BASIC POST-FLIGHT (BPO), COMBINED PR/BPO AND COMBINED PR/TH, THRU-FLIGHT (TH), QUICK TURN (QT), INTEGRATED COMBAT TURN (ICT), WALK AROUND INSPECTION (WAI), AND PRE-LAUNCH INSPECTION (PLI)." The maintenance person who accomplishes or supervises the PR/BPO, combined PR/BPO, combined PR/TH, TH, QT, ICT, WAI or PLI will enter in the appropriate columns the type inspection, minimum signature and the local date and time completed, MAJCOMs have the option of using Zulu time. When initiating a new form, transfer the time and date of the completed inspection (provided the preflight validity period has not expired) and carry forward the individual's name who accomplished the inspection in Block 5. The individual transcribing the entries enters the abbreviations "CF," their first and last name initial in the "ACCOMPLISHED BY" column of the old form. Print the name of the individual in the "ACCOMPLISHED BY" column on the new form as well as the time and date. Record the entries for each column of this block as follows:

3-18.5.6.1 "FLT NO." Use of this block is a MAJCOM option.

3-18.5.6.2 "TYPE." Enter the abbreviation of the type inspection.

3-18.5.6.3 "ACCOMPLISHED BY." Use this column to record the minimum signature of the individual who accomplished the inspection.

3-18.5.6.4 "COMPLETED DATE, TIME." Enter the date in YYYYMMDD format, and time of completion.

3-18.5.7 BLOCK 6, "STATUS DATA." Entries will be:

3-18.5.7.1 "STATUS TODAY." At initiation of this form, bring forward the last status symbol of the previous form to box 1 of the new form. If no discrepancies exist on the aircraft, enter the last name initial of maintenance personnel who accomplished or supervised the pre-flight inspection in box 2. The status symbol recorded in these columns always represent the most serious condition. When status changes occur, the maintenance technician responsible for the change will use the next open box to record the applicable symbol. Symbol entries recorded in these columns will never be erased, initialed over or changed even if entered in error. Explain any symbols entered in error by an AFTO FORM 781A entry prior to entering a new correct status symbol in the next open box. Enter symbols in the "STATUS TODAY" block of the AFTO FORM 781H to reflect current status of the aerospace vehicle. A black last name initial indicates no known discrepancies which require a symbol exists and no inspections are due and/or overdue on the aerospace vehicle.

3-18.5.7.2 "BOX NO." This column is used to record the box number of the "STATUS TODAY" column for which a conditional/exceptional release is being signed. This entry is the responsibility of the individual who signs the exceptional release.

3-18.5.7.3 "CONDITIONAL/EXCEPTIONAL RELEASE." A conditional/exceptional release is required before flight. Under no circumstances will the conditional/exceptional release be granted when the aircraft status is indicated by a Red X symbol. The conditional/exceptional release serves as a certification that the authorized individual who enters a signature in this column has reviewed the active forms to ensure the aerospace vehicle is safe for flight.

3-18.5.7.3.1 A list of personnel designated to sign the conditional/exceptional release will be approved by the GP/CC and include maintenance officers, senior NCOs, or their civilian equivalents. If, after thorough review, the GP/CC determines that local conditions require the assignment of other than maintenance officers, senior NCOs or their civilian equivalents to sign exceptional releases, a waiver request is forwarded to the MAJCOM for approval. Such request must fully justify the need for the waiver and identify actions being taken or planned to resolve the problem.

3-18.5.7.3.2 When a release is signed by one of these designated individuals, it will not require another signature during the period of pre-flight validity unless additional red symbol discrepancies are encountered or the 781H has to be removed as outlined in paragraph 3-17.1. When an additional symbol is entered or the form is removed, the prior signature is no longer valid and another exceptional release is necessary. When the designated personnel have not signed the exceptional release, the aircraft commander will sign the release. When a release is signed by a pilot, it is effective only for those flights in which the releasing pilot participates as an aircrew member. The launch control officer, maintenance officer, senior NCO, or civilian equivalent will sign a conditional/exceptional release, when required for installed air launched missiles. For aircraft (including bailed and government furnished property) undergoing maintenance at a contractor's facility, conditional/exceptional releases shall be signed by personnel identified by the contractor in a listing provided to the Air Force Contract Administration Office, as required by TO 00-20-1. Additional special instructions relative to exceptional releases are as follows:

3-18.5.7.3.3 To readily identify exceptional releases that are granted by a maintenance officer, enter the abbreviation "MO" after the signature of the maintenance officer. Noncommissioned officers use the abbreviation "MS" (maintenance superintendent) after their signature. Civilian personnel will use the abbreviation "CE" and the aircraft commander will use "AC."

3-18.5.7.4 An exceptional release may be granted as a conditional release. A conditional release allows an aircraft to be flown although a discrepancy exists which restricts the aircraft's capabilities. When such conditional releases are granted, the conditions of the release will be described by an appropriate entry in the AFTO FORM 781A. Additionally, enter "conditional, see 781A, (page number, and item number)" in the next open line after the exceptional release signature. For example, a conditional release would be given to an aircraft with defective landing lights as the aircraft would not be able to be flown during hours of darkness.

3-18.5.7.4.1 To indicate what outstanding items are to be covered by the conditional/exceptional release, maintenance personnel will draw a red line under the entire last entry on the AFTO FORM 781A. When the conditional/exceptional release is signed, the releaser places their initials at the left margin of the AFTO FORM 781A beside the red line entry. If no additional red symbol entries are encountered and another individual signs a conditional/exceptional release, the individual will initial immediately above the original initials on the AFTO FORM 781A. If new red symbol entries are entered, draw a new red line under the last item to indicate coverage of the next exceptional release signature. If the same person that signed the previous conditional/exceptional release reviews the discrepancies and corrective actions, the individual may initial beside the red line and release the aircraft without another signature in block 6, provided the status has not changed.

3-18.5.8 BLOCK 7, "FLIGHT CONDITION DATA." The aircraft commander enters data in this block in accordance with AFI 11-401 and the 00-20-series technical orders.

3-18.5.8.1 Upon completion of a flight, the pilot will indicate opposite the applicable flight number the condition after flight. If discrepancies were encountered during flight, enter the total number of such discrepancies in the appropriate "COND AFT FLT" block. If no discrepancies were encountered, enter "OK" in the appropriate "COND AFT FLT" block.

3-18.5.8.2 If an over-temperature of a jet engine is encountered, enter the number of such encounters opposite the applicable flight number in the "OVER TEMP ENCTRD" column. Record a description of conditions encountered, including temperatures reached and duration of the over-temperature, on the AFTO FORM 781A. Additionally, if an over-temperature is encountered during ground operation, record a descriptive entry on the AFTO FORM 781A.

3-18.5.8.3 The aircrew will enter auxiliary engine or APU operation in the column titled "AUX ENGINE OR APU OPERATION" and will represent actual hours of operation. Entries may be omitted when an auxiliary engine or APU is equipped with an hour meter or the unit is not a time change item.

3-18.5.8.4 Upon completion of the above entries, the pilot(s) enter their signature in the "PILOT'S SIGNATURE" block. In addition, a description of each discrepancy encountered during flight will be entered in the AFTO FORM 781A.

3-18.5.9 BLOCK 8, "MUNITIONS AND/OR GUNS STATUS." This block indicates the status of loaded munitions and/or guns and refers to the page and item number in the AFTO FORM 781A for types and quantities loaded. Use of this block will be a MAJCOM option.

3-18.5.9.1 "STATUS." The load-crew chief circles the appropriate letter in red, L for "loaded," E for "empty," or N for "system not installed." After all items have been expended or downloaded, place a black X in the STATUS and 781A ENTRY blocks. When new items have been uploaded, indicate the new status in the next open block.

3-18.5.9.2 "AFTO FORM 781A ENTRY." Enter the corresponding page (P) number and item (I) number of the AFTO FORM 781A munitions entry. If "STATUS" is "E," or "N," X out this block.

3-18.5.10 BLOCK 9, "AIRFRAME TIME." Upon initiation of a new form, transcribe the total time since new from the "TOTAL" block of the previous form to the "PREVIOUS" block of the new form. Ensure the airframe time is updated in the AFTO FORM 781J. At the completion of each flight, record the flight time of each AFTO FORM 781 pertaining to the date involved in the appropriate flight blocks. Add these entries for a new total entry in the "TOTAL" block at the end of the specified flying period.

3-18.5.11 BLOCK 10, "LANDINGS." Use this block to record "PREVIOUS FULL STOP" and "TOTAL" landings on aircraft for which maintenance or inspection of the landing gear system or components is based on a specified number of landings. Maintain a separate record of full stop landings for aircraft under this criteria. The pilot will document total landings, which include full stop landings, in the "TOTAL" column and document only the full stop landings in the "FULL STOP" column. These entries will be added for a new total entry in the "TOTAL" block at the end of the specified flying period.

3-18.5.12 BLOCK 11, "CARTRIDGE/JET FUEL STARTER (JFS) STARTS." For selected engines, maintain a history of cartridge/JFS starts to determine starter time change. The pilot will document in the "CARTRIDGE/JFS START" column by engine number, the number of cartridge/JFS starts for each flight. Maintenance personnel will document each ground cartridge/JFS start. These entries will be added for a new total in the "TOTAL" block at the end of the specified flying period. This total will be carried forward to block 11, "PREVIOUS" of the new AFTO FORM 781H.

3-18.5.13 BLOCK 12, "ENGINE CYCLE DOCUMENTATION." For selected engines, maintain a history of cycles for compressors, turbine disks, and other designated components to determine fatigue life. The pilot will document, on the "FLIGHTS" line, cycles which have occurred during the flight. The definition of cycles for each engine is included in the applicable aircraft -1, -2, and -6 TOs and the appropriate engine scheduled inspection and maintenance requirements manual.

NOTE

When blocks 10, 11 and 12 are not used as printed, that is block 10 for landings; block 11 for cartridge/JFS starts; etc., line out the printed words and use the blocks for other purposes.

3-18.5.14 BLOCK 13, "SERVICING DATA." Servicing data is grouped into four basic categories: fuel, oil, oxy and nitrogen/water. Specific entries are as follows:

NOTE

Line through all unused blocks in a servicing number row. For example, if only fuel is checked or serviced, line through oil, oxy, and nitrogen/water blocks not used in the servicing number row. This will ensure that no additional entries are made on a service line that has been certified in block 14.

3-18.5.14.1 "OCTANE or GRADE." For each servicing line, enter the fuel grade/octane with which the aircraft was serviced. Example: JP-8.

3-18.5.14.2 "QTY SRVCD." Enter the total quantity of fuel (liters, gallons, or pounds) serviced or drained at one operation. If no service is required, enter a "0" (zero) to serve as a positive indication that the tanks have been checked. To indicate the unit of measure being used for the "QTY SRVCD" and "TOTAL IN TANKS" entries, enter "G," "P," or "L," which will indicate gallons, pounds or liters, as a part of the serviced or in tanks entry. Example: 2,750P or 6,243L. Enter total gallons, liters or pounds of fuel drained in red and will carry a minus sign prefix. Example: -250G. Make these entries immediately upon completion of the servicing by maintenance personnel performing or supervising the servicing. Record fuel taken onboard, fuel dumped overboard, fuel off loaded or oil transferred from an auxiliary tank to an engine or engines during flight, as a separate service in the next open block. Enter the quantity of fuel dumped or off loaded in red and carry a minus sign prefix. The pilot or other crew member will make these entries for in-flight operations.

3-18.5.14.3 "TOTAL IN TANKS." Enter the total number of gallons, liters, or pounds of fuel onboard in all tanks (excluding in-flight refueling tanks of tanker aircraft which will require a separate line entry when a different octane or grade of fuel is on board than that of the aircraft) after servicing, draining, or completion of an "in-tank" check. Enter a "G," "P" or "L" as described above.

3-18.5.14.4 "OIL (HALF-PINTS, PINTS, QUARTS, GALLONS, OR LITERS)." In the "SER" column of the applicable servicing number row, enter the number of half-pints, pints, quarts, liters, or gallons of oil serviced or drained from each oil tank. Record the total number of half-pints, pints, quarts, gallons or liters of oil in each engine tank after servicing or draining in the "IN" block. If no servicing is required, enter a "0" (zero) in the "SER" block to serve as a positive indication that the "in-tanks" checks have been made. Enter oil drained in red and will carry a minus symbol prefix. Example: -15. To indicate a complete oil change, circle amount added in "SER" column in red. Line out the non-applicable words of the title of this block to indicate

what units of measure are being used and list the type and/or specification of the oil serviced to the right of the title if different than what the TO calls for. If different oils are mixed according to TO 42B2-1-1, make an appropriate entry in the AFTO FORM 781A. Aircraft having requirements for recording constant speed drive (CSD) and extended range oil tank (ext. range) oil servicing, may draw a red line between rows after the last engine entry and record CSD or EXT oil servicing information behind the red line separator. Cross out the engine number of the column being used and pencil in the CSD or EXT number. Example: CSD # or EXT range #.

NOTE

Accurate running totals of oil added to each engine are essential for performing accurate OAP analysis and preventing potentially catastrophic engine/component failures. Ensure amounts of oil serviced for each engine are also annotated on the aircraft AFTO FORM 781J in the appropriate engine "OIL ADDED" column. For engine programs that do not require oil samples to be taken, there is no requirement to record amounts of oil serviced on the 781J. Using the AFTO FORM 781J to maintain precise, cumulative totals of oil added between OAP samples will facilitate proper documentation in the DD FORM 2026, OIL ANALYSIS PROGRAM SAMPLES "OIL ADDED SINCE LAST SAMPLE" block.

3-18.5.14.5 "OXY PRESS OR QTY." In the applicable servicing line, enter the oxygen system pressure or quantity as indicated at the time of the check or after servicing. The individual making the check will assure that the pressure or quantity is at or above the minimum prescribed in the applicable -2 technical order. Line out the non-applicable portion of the title. Leave this block blank for aircraft not equipped with oxygen.

3-18.5.14.6 "NITROGEN/WATER." In the nitrogen/water servicing line, enter the nitrogen/water quantity as indicated at the time of the check or after servicing.

3-18.5.15 BLOCK 14, "SERVICING CERTIFICATION." The individual who performs or supervises the servicing, draining, or "in-tanks" check of items in block 13 enters their signature and employee number in the "BY" block corresponding with the numbered servicing or draining entries recorded in block 13. Enter the station name and date (YYYYMMDD) at which the action was performed in the corresponding "AT" and "DATE" blocks. (NOTE: Print the station name to ensure legibility.) Record this entry in parentheses below the signature of the individual who performs the "in-tanks" fuel check. The pilot or other crew member will sign the "BY" block, the words "in-flight" or "hot pit" will be entered in the "AT" block and the date will be entered in the "DATE" block to certify any in-flight or hot pit servicing accomplished. When transcribing the 781H, the last reading/entry under oil quantity will be recorded from the old 781H to the new 781H to for each engine.

3-19 AFTO FORM 781J, AEROSPACE VEHICLE ENGINE FLIGHT DOCUMENT (FIGURES 3-18 AND 3-19).

3-19.1 "FROM" and "TO." Enter the date (YYYYMMDD, ex: 20001102 for 2 Nov 2000) on which the form was initiated in the "FROM" block. When the form is closed out, enter the date in the "TO" block. The "FROM" block on the new form will agree with the "TO" block on the old form.

3-19.2 "MDS." Enter the aerospace vehicle mission, design and series designator. Example: C130H.

3-19.3 "SERIAL NO." Enter the aerospace vehicle serial number. Example: 85-1428, 64-14828.

3-19.4 "PAGE-OF-PAGES." When more that one sheet of this form is required, enter the page number and the total number of pages.

3-19.5 "DATE." Enter the date on which the aircraft flies in the first open line.

3-19.6 "AIRFRAME TIME." In the first open block enter the aerospace vehicle or equipment time reflected in the last entry of the previous AFTO FORM 781J. The last aerospace vehicle time entry in this column should always correspond with the entry in block 9, of the AFTO FORM 781H. Each day the aerospace vehicle flies, enter the time accrued for that day's flying or operation on the line opposite the specific date entry identifying that day's operation. Add this entry to the previously recorded time to provide new totals. GP/CCs may elect to post entries on this form for each flight in lieu of the specified flying period.

3-19.7 "OIL SAMPLE (X)." Enter an X in this block to indicate the airframe time that an oil sample was taken for oil analysis.

3-19.8 "OIL ADDED." In the first "OIL ADDED" blocks, enter the total amounts of oil added in half-pints (HP), pints (P) or quarts (Q), as reflected on the last entry of the previous AFTO FORM 781J.

NOTE

- Line through non-applicable measurements in the in the header "AIRCRAFT AND ENGINE OPERATING TIME, CYCLE AND OIL ADDED" (Half-Pints, Pints, Quarts).
- Each day the aerospace vehicle flies enter the total amount of oil serviced for each engine on the line corresponding to the specific date entry identifying that day's operation. The GP/CC may elect to post entries for each flight in lieu of each day. The amount of oil serviced for each engine should match oil servicing amounts reflected in the AFTO FORM 781H, block 13, "SERVICING DATA." Add these oil amounts to the previously recorded "OIL ADDED" column amounts to derive new cumulative totals.
- Use this column to maintain precise, cumulative totals of oil added to each engine to facilitate accurate documentation in the DD FORM 2026, OIL ANALYSIS PROGRAM SAMPLES, "OIL ADDED SINCE LAST SAMPLE" block. Accurate running totals of oil added to each engine between oil samples are essential for performing accurate oil analysis and preventing potentially catastrophic engine/component failures. Ensure amounts of oil serviced for each engine are also annotated on the aircraft AFTO FORM 781H. For engine programs that do not require oil samples to be taken, there is no requirement to record amounts of oil serviced on the 781H.

3-19.9 "ENGINE POS #." The first engine "ENGINE POS #" column is for engine number 1, the second is for engine number 2 and so on. If more than four engines, label each column for which the servicing data represents.

3-19.10 "OIL CHANGE TIME." Enter the engine time at the last oil change. To facilitate completion of a DD FORM 2026, OIL ANALYSIS RECORD (TO 33-1-37), circle the engine operating time in red when an oil change is made.

3-19.11 "ENGINE TIME" and "CYCLES." Entries of engine time and cycles will be documented in the same manner as aircraft time. For aircraft with more than four engines, use front and back or use a second form, if single sided, to track the additional engines.

3-19.11.1 For documentation purposes, engine time will reflect engine total hours accumulated throughout the life of the engine. Therefore, the accrued cycles column will start with the accumulated cycles annotated on the AFTO FORM 95 prepared by the overhaul activity and will be found immediately after the total time (TT) and time since complete overhaul (TSCO). This information will be used for the initial cycles entry on the new AFTO FORM 781J. If previously accumulated cycles are not available, contact the IM through the MAJCOM.

3-19.11.2 On aircraft which have engine-recording devices installed, the engine time need not be entered in the time columns. Line out the "Engine Time" in the No. 1 engine block and in as many other number engine blocks as required and enter the Event History Recorder (EHR) "Ser. No." or Engine Time Temperature Recorder (ETTR) "Ser. No." as applicable. Use these columns to maintain the recording device serial number.

3-19.11.3 When an engine change occurs, post a brief entry in the next open date line, and reopen entries for the new engine together with active entries of other columns in the "TOTAL" block. Transcribe total cycles accumulated on the removed engine to the engine AFTO FORM 95. Extract accumulated cycles on the newly installed engine from the AFTO FORM 95.

3-19.12 "CARRIED FORWARD". When all columns have been completely filled in or when columns have been utilized to the extent that initiation of a new AFTO FORM 781J becomes necessary; total all columns in the appropriate blocks in the line titled "CARRIED FORWARD." Carry these individual totals along with other applicable data forward to the appropriate blocks of the new AFTO FORM 781J.

3-19.13 When corrections are made to the airframe and engine operating time and cycle documentation data, enter them in red to highlight the changes. For automated forms, draw a red line under the corrected data line to highlight the action.

3-19.14 For jet engine powered missiles, use the AFTO FORM 781J to document the missile airframe time and engine operating time. Missile airframe time will be the same as each day's flight time of the carrier aircraft. The total missile airframe time will be cumulative for the life of the missile. Engine operating time will be cumulative for the installed engine and the document will be appropriately adjusted when an engine change occurs. When missile forms are carried aboard the aircraft, the aircraft commander will assure the time entries are made.

3-20 AFTO FORM 781K, AEROSPACE VEHICLE INSPECTION, ENGINE DATA, CALENDAR INSPECTION, AND DELAYED DISCREPANCY DOCUMENT (FIGURES 3-20 AND 3-21).

3-20.1 Enter the appropriate heading entries (Date [From, To, MDS, and Serial Number] at the top of the form in accordance with the instructions that apply to the 781H (paragraphs 3-18.5.2 through 3-18.5.5). Enter symbols in the "SYM" block of the AFTO FORM 781K, to reflect the seriousness of the particular discrepancy. Some rules concerning symbol entries are (1) never enter the Red X on the AFTO FORM 781K; only use Red Diagonal and Dash symbols. Once entered there, symbols will not be erased or initialed over. (2) When the symbol for a time compliance technical order (TCTO) or a discrepancy entered on the AFTO FORM 781K is to be upgraded, transfer that TCTO or discrepancy to the AFTO FORM 781A. Enter the upgraded symbol in the AFTO FORM 781A "SYM" block. (3) If a symbol is entered in error, the person making the entry will enter the following statement in the "TCTO NUMBER AND PUBLICATION DATE OR DISCREPANCY BLOCK": "Symbol entered in error, discrepancy and correct symbol reentered on page _____, item _____." The person will enter the date and their signature in the appropriate blocks. Then reenter the discrepancy, with the correct symbol, on the next open line.

3-20.2 BLOCK A, "AEROSPACE INSPECTION STATUS." Use the spaces to the right of the title "NEXT PERIODIC, MAJOR, OR PHASED INSPECTION DUE NO." to document the number and type of the next inspection due. Use the "TYPE," "COMPL," and "NEXT DUE" columns to identify the types of inspections involved, including HSC and HPO, the aerospace vehicle time or date an inspection was completed; and the aerospace vehicle time or date an inspection is next due. Upon completion of the prescribed inspection listed in this block, line out the old "COMPL" and the next "NEXT DUE" entries and enter the new "COMPL" and "NEXT DUE" time.

3-20.3 BLOCK B, "ENGINE DATA." This block is provided to record engine position, serial number, and engine change due time. In the space provided for "ENG SER NO," enter the serial number of each engine in the space provided to the right of the applicable "PSN" number that denotes the position in which each engine is installed. In the "ENG CHANGE DUE TIME" column to the right of the "ENG SER NO" column, enter the aircraft/engine time at which the next engine change is due. Transcribe only current engine entries when initiating a new form. This block may be left blank for ATDs and for aircraft which have engine history recording devices installed.

3-20.4 BLOCK C, "CALENDAR AND HOURLY INSPECTION SCHEDULE." Use this block to document calendar inspection items that are to be inspected or tested at a specific hourly or calendar period. Items listed will be primarily those short-term special inspection requirements that frequently become due. Short-term items are those having an interval of less than six months or an hourly interval less than the periodic inspection interval. Load all aircrew life support items to an automated system for control purposes. Maintain entries for those accessories that require an oil change or lubrication on a basis of actual operating hours. To facilitate completion of the DD FORM 2026 (TO 33-1-37) make a single line entry on the AFTO FORM 781K stating, "Engine oil samples due." This will provide a history of oil samples at specified hourly intervals and the next oil sample due date. Compute oil sample due times using the aerospace vehicle time. No entry is required when the sample is a -6 inspection workcard item or if it is taken concurrently with a scheduled inspection.

3-20.5 Block D, "DELAYED DISCREPANCIES, URGENT ACTION, AND OUTSTANDING ROUTINE ACTION TCTOs." Enter all delayed discrepancies, urgent action TCTOs, Category I routine action safety modification TCTOs, and outstanding routine action TCTOs in this block. Delayed discrepancies may be transferred from the AFTO FORM 781A, or upon completion of scheduled maintenance from the AFTO FORM 349. Red X entries will not be entered in the AFTO FORM 781K. Enter urgent action and Category I routine safety TCTOs upon notification of applicability if not entered on the AFTO FORM 781A in

anticipation of immediate accomplishment. Any other specific routine TCTOs designated by the GP/CC or higher authority will be listed individually.

3-20.5.1 Maintenance personnel will enter the proper symbol in the "SYM" block.

3-20.5.2 The assigned JCN will be entered in the "JOB CONTROL NUMBER" column.

3-20.5.3 Enter the TCTO number date, and short title in the "DELAYED DISCREPANCY OR TCTO NUMBER AND PUBLICATION DATE" column. When delayed discrepancies are added to this section for reasons other than parts, a brief explanation will follow the discrepancy.

3-20.5.4 Enter the supply document number for all delayed discrepancies, if applicable, in the "DOCUMENT NUMBER" column. For TCTOs, no supply document number (when parts, kits, and tools are required) will be required.

3-20.5.5 Enter the TCTO grounding date or airframe time, as applicable, in the "GROUND DATE/TIME" column.

3-20.5.6 When a delayed discrepancy or TCTO entered on the AFTO FORM 781K is to be corrected or accomplished, the entry must be transferred to the AFTO FORM 781A. After the entry is transferred to the AFTO FORM 781A, follow procedures for clearing AFTO FORM 781A entries. When an aircraft is undergoing a scheduled inspection, transfer entries to an AFTO FORM 349 or to the AFTO FORM 781A for corrective action or upgrading.

3-20.5.7 When an entry is transferred, the person accomplishing the transfer will enter their employee number for the entry in the "TRANSFERRED BY EMPLOYEE NUMBER" column. Line out the transferred entry with a single line except for the employee number block. The line will denote that the entry has been transferred. When a Red Dash symbol is involved, draw the line above or below the Red Dash, so it will not hide the symbol.

3-20.6 When it becomes necessary to initiate a new AFTO FORM 781K carry forward open delayed discrepancies, TCTOs and other data affecting the status of the aerospace vehicle to the new form. Upon completion of the transcribing action, the transcriber will enter their minimum signature in the "SIGNATURE and EMPLOYEE NO." space at the bottom of block D.

3-21 AFTO FORM 781L, RECORD OF REMOVAL/INSTALLATION OF CONTROLLED CRYPTOGRAPHIC ITEMS (CCI) (FIGURE 3-22).

3-21.1 Use this form to provide control for serial number CCI and as an aid in serial number accountability. When used, the form is completed in two copies with one copy forwarded to base supply (document control) and one copy included in the aircraft records. Complete the form for the following conditions:

3-21.2 When an aircraft scheduled for programmed depot maintenance (PDM) retains its CCI serial number controlled asset, the owning unit generates the form to indicate the status.

3-21.3 When an aircraft is going to a depot that employs foreign nationals and a US citizen will not be available to control the CCI asset, the owning unit removes the asset prior to aircraft departure and generates the form to indicate the status.

3-21.4 When CCI equipment is replaced and a serial number controlled asset from another organization is installed, the maintenance technician performing the replacement action generates the form.

3-21.5 Use the following entries when completing the form:

3-21.5.1 PART I, "UNIT, BASE AND EQUIPMENT INFORMATION." Complete all applicable items.

3-21.5.2 PART II, "CCI INFORMATION:"

3-21.5.2.1 SECTION A, "REMOVED CCI INFORMATION." Complete all items with the exception of optional items "ACCOUNT/DOCUMENT NUMBER" and "CUSTODIAN."

3-21.5.2.2 SECTION B, "INSTALLED CCI INFORMATION." Complete all items with the exception of optional items "ACCOUNT/DOCUMENT NUMBER."

3-21.5.3 PART III, "GENERAL COMMENTS." Use for any pertinent information.

3-22 AFTO FORM 781M, STATUS SYMBOLS AND FUNCTIONAL SYSTEM CODES (FIGURES 3-23 AND 3-24).

3-22.1 The AFTO FORM 781M contains basic information to serve as an aid in making entries on the AFTO FORMS 781A and 781K. It is inserted in a clear vinyl page holder and placed at the rear of the binder.

3-23 AFTO FORM 781N, J-79 ENGINE RUNUP RECORD (FIGURES 3-25 AND 3-26).

3-23.1 The AFTO FORM 781N is maintained in the aircraft forms binder for aircraft equipped with the J-79 engine. Complete the 781N in accordance with the TOs referenced in the form.

3-24 AFTO FORM 781P, SUPPORT GENERAL DOCUMENTATION RECORD (FIGURE 3-27).

3-24.1 Support General Documentation records are those maintenance actions that are considered routine in the day to day support of the weapon system operation. Support General includes parking, fueling, cleaning, documentation, unpacking, scheduled and unscheduled inspections, etc.

3-24.2 MAJCOMs have the option of requiring Support General reporting.

3-24.3 Use the AFTO FORM 781P to record support general actions when an automated system is unavailable. Support General Codes beginning with 03, 04, and 09 will be reported.

(THIS FORM IS SUBJECT TO THE PRIVACY ACT OF 1974 - SEE REVERSE)

I MISSION DATA

1. DATE	2. MDS	3. SERIAL NUMBER	4. UNIT CHARGED FOR FLY HOURS/HOSM-CODE	5. LOCATION

FLT NO	MISSION NUMBER 6	MISSION SYMBOL 7	PEID 8	FROM (ICAO) 9	TO (ICAO) 10	TAKE OFF TIME (Z) 11	LAND TIME (Z) 12	FLIGHT TIME 13	14. LANDINGS: TOUCH AND GO	14. LANDINGS: FULL STOP	14. LANDINGS: TOTAL	SORTIES 15	SPECIAL USE 16
1													
2													
3													
4													
5													
6													
7													
8													
17. OPERATING UNIT							TOTALS						

II AIRCREW DATA

FLYING ORGN	SSN	LAST NAME	FLT AUTH DUTY CODE	FLIGHT TIME: PRIMARY	FLIGHT TIME: SECONDARY	FLIGHT TIME: INSTRUCTOR	FLIGHT TIME: EVALUATOR	FLIGHT TIME: OTHER	FLIGHT TIME: TOTAL	SORTIES	FLT CONDITIONS: PRIMARY NIGHT	FLT CONDITIONS: PRIMARY INST	FLT CONDITIONS: PRIMARY SIM INSTM	FLT CONDITIONS: NVG	RESERVE STATUS
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33

34. MAINT REVIEW	35. PILOT REVIEW	36. OPS REVIEW	37. AFORMS PROCESSING COMPLETED		
			DATE AND TIME	SIGNATURE	DEVICE IDENT

AFTO Form 781, 19990629 (EF-V1) **PREVIOUS EDITION IS OBSOLETE** **AFORMS AIRCREW/MISSION FLIGHT DATA DOCUMENT**

H9000626

Figure 3-1. AFTO FORM 781, AFORMS Aircrew/Mission Flight Data Document (Front)

AUTHORITY: 10 U.S.C. 8012; 44 U.S.C. 3101; and EO 9397
PRINCIPAL PURPOSES: Source document for recording individual flying time, sorties and or events for input into the Air Force Operations Resource Management System (AFORMS) and Flying Hour Reporting System.
ROUTINE USES: Validation of accomplishment of flying requirements needed to attain or maintain professional standards. Validation of hourly flying accomplishments where necessary to authorize payment of flying incentive pay. Provide basic record of each flight of USAF aircraft, reason for mission, duration, crew members and duty positions. Used as a source document for determining number of hours of operating time on airframes and power plants. The SSN is used for identification of individuals and records.
DISCLOSURE IS MANDATORY: Individuals must furnish the information to meet qualification and incentive pay standards. Failure to provide the information and SSN could result in loss of records with consequent loss of professional qualification and incentive pay entitlement.

II

FLYING ORGN	SSN	LAST NAME	FLT AUTH DUTY CODE	FLIGHT TIME						SORTIES	FLT CONDITIONS				RESERVE STATUS
				PRIMARY	SECONDARY	INSTRUCTOR	EVALUATOR	OTHER	TOTAL		PRIMARY NIGHT	PRIMARY INST	PRIMARY SIM INSTM	NVG	
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33

REMARKS OTHER THAN FLIGHT DISCREPANCIES

HOURS AND MINS TO HOURS AND TENTH CONVERSION TABLE

1 OR 2 MIN	.0 HR.
3 THRU 8 MIN	.1 HR.
9 THRU 14 MIN	.2 HR.
15 THRU 20 MIN	.3 HR.
21 THRU 26 MIN	.4 HR.
27 THRU 33 MIN	.5 HR.
34 THRU 39 MIN	.6 HR.
40 THRU 45 MIN	.7 HR.
46 THRU 51 MIN	.8 HR.
52 THRU 57 MIN	.9 HR.
58 THRU 60 MIN	NEXT WHOLE HOUR

AFTO 781, 19990629 *(Reverse)*

H9000627

Figure 3-2. AFTO FORM 781, AFORMS Aircrew/Mission Flight Data Document (Reverse)

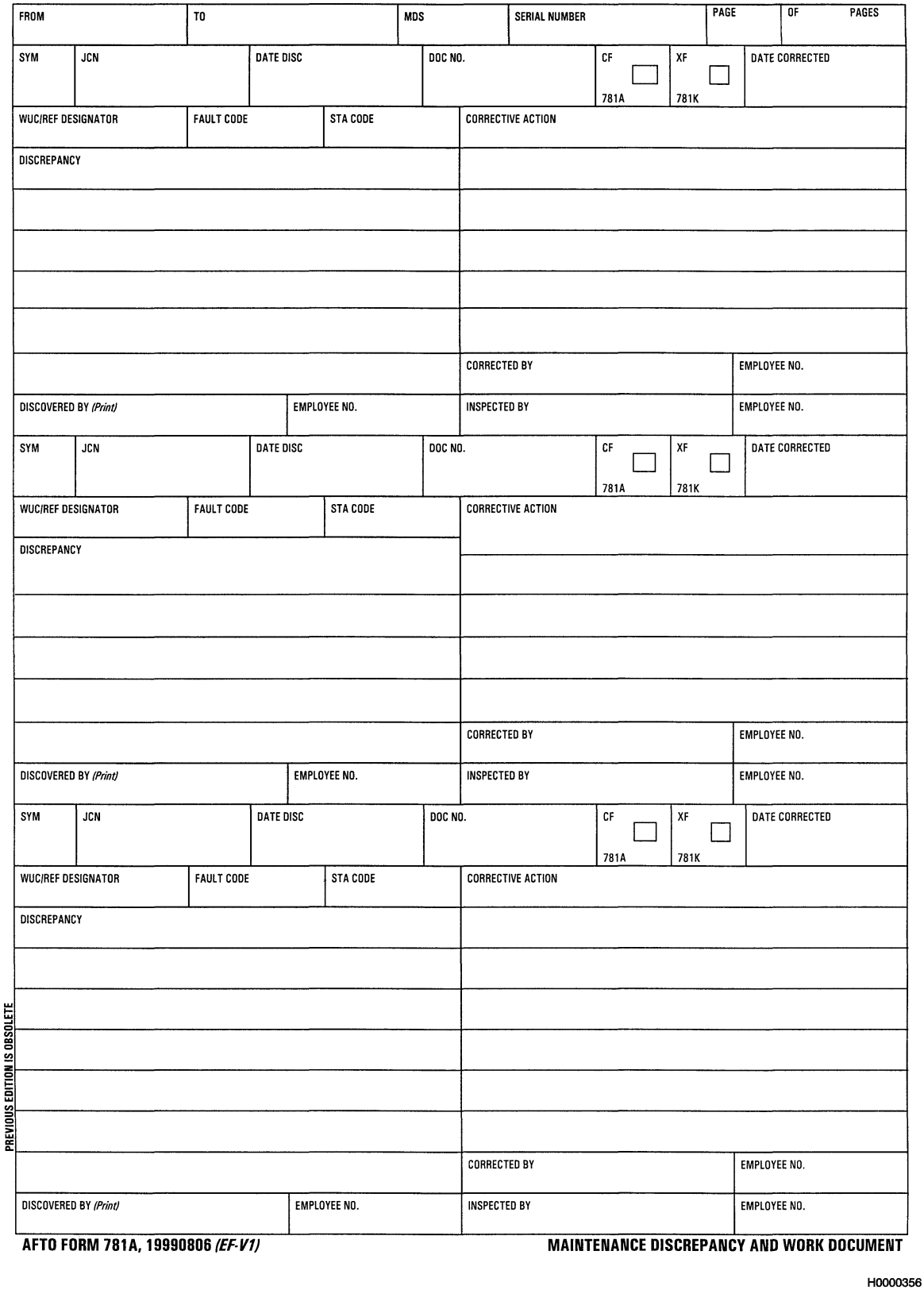

Figure 3-3. AFTO FORM 781A, Maintenance Discrepancy and Work Document

FROM	TO	MDS	SERIAL NUMBER	PAGE	OF PAGES

SYM	JCN	DATE DISC	DOC NO.	CF ☐ 781A	XF ☐ 781K	DATE CORRECTED

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION

DISCREPANCY	
	CORRECTED BY / EMPLOYEE NO.
DISCOVERED BY *(Print)* / EMPLOYEE NO.	INSPECTED BY / EMPLOYEE NO.

SYM	JCN	DATE DISC	DOC NO.	CF ☐ 781A	XF ☐ 781K	DATE CORRECTED

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION

DISCREPANCY	
	CORRECTED BY / EMPLOYEE NO.
DISCOVERED BY *(Print)* / EMPLOYEE NO.	INSPECTED BY / EMPLOYEE NO.

SYM	JCN	DATE DISC	DOC NO.	CF ☐ 781A	XF ☐ 781K	DATE CORRECTED

WUC/REF DESIGNATOR	FAULT CODE	STA CODE	CORRECTIVE ACTION

DISCREPANCY	
	CORRECTED BY / EMPLOYEE NO.
DISCOVERED BY *(Print)* / EMPLOYEE NO.	INSPECTED BY / EMPLOYEE NO.

AFTO FORM 781A, 19990806 ***(Reverse)***

H0000357

Figure 3-4. AFTO FORM 781A, Maintenance Discrepancy and Work Document (Reverse)

FROM	TO		MDS		SERIAL NUMBER	
ITEM	SERIAL NUMBER	POSITION	DATE INSTALLED	SIGNATURE AND EMPLOYEE NUMBER	DATE REMOVED	SIGNATURE AND EMPLOYEE NUMBER

AFTO FORM 781B, 19990806 *(EF-V1)* PREVIOUS EDITION IS OBSOLETE **COMMUNICATION SECURITY EQUIPMENT RECORD**

H0000363

Figure 3-5. AFTO FORM 781B, Communication Security (COMSEC) Equipment Record

FROM	TO	MDS	SERIAL NUMBER

ITEM	TYPE / SIZE	QUANTITY	POSITION	COMPARTMENT	WEIGHT	SYS CHECKED / DATE & TIME	OPERATIONAL STATUS	SIGNATURE AND EMPLOYEE NUMBER

REMARKS

AFTO FORM 781C, 19990806 *(EF-V1)* PREVIOUS EDITION IS OBSOLETE **AVIONICS CONFIGURATION AND LOAD STATUS DOCUMENT**

H9000622

Figure 3-6. AFTO FORM 781C, Avionics Configuration and Loads Status Document

ITEM	TYPE / SIZE	QUANTITY	POSITION	COMPARTMENT	WEIGHT	SYS CHECKED DATE & TIME	OPERATIONAL STATUS	SIGNATURE AND EMPLOYEE NUMBER
REMARKS								

AFTO FORM 781C,19990806 *(Reverse)*

H0000358

Figure 3-7. AFTO FORM 781C, Avionics Configuration and Load Status Document (Reverse)

FROM	TO	MDS	SERIAL NUMBER	PAGE

INSPECTION ITEM	FREQUENCY	NEXT DUE	NEXT DUE	NEXT DUE	NEXT DUE	NEXT DUE	NEXT DUE

PREVIOUS EDITION IS OBSOLETE

AFTO FORM 781D, 19990806 ***(EF-V1)*** **CALENDAR AND HOURLY ITEM INSPECTION DOCUMENT**

H0000359

Figure 3-8. AFTO FORM 781D, Calendar and Hourly Item Inspection Document

PAGE

INSPECTION ITEM	FREQUENCY	NEXT DUE	NEXT DUE	NEXT DUE	NEXT DUE	NEXT DUE	NEXT DUE

AFTO FORM 781D,19990806 *(Reverse)*

H0000360

Figure 3-9. AFTO FORM 781D, Calendar and Hourly Item Inspection Document (Reverse)

FROM	TO	MDS	SERIAL NUMBER	PAGE

NOMENCLATURE AND TYPE A	SERIAL NO. B	LOCATION C	REPLACE EVERY D	PREVIOUS OPERATING TIME E	INSTALLED AT F	REPLACEMENT DUE AT G	REMOVED H	TIME ACCUMULATED I	TOTAL OPERATING TIME J

AFTO FORM 781E, 19990806 *(EF-V1)* **PREVIOUS EDITION IS OBSOLETE.** **ACCESSORY REPLACEMENT DOCUMENT**

H9000624

Figure 3-10. AFTO FORM 781E, Accessory Replacement Document

PAGE

NOMENCLATURE AND TYPE A	SERIAL NO. B	LOCATION C	REPLACE EVERY D	PREVIOUS OPERATING TIME E	INSTALLED AT F	REPLACEMENT DUE AT G	REMOVED H	TIME ACCUMULATED I	TOTAL OPERATING TIME J

AFTO FORM 781E, 19990806 *(Reverse)*

H0000256

Figure 3-11. AFTO FORM 781E, Accessory Replacement Document (Reverse)

1. ID NUMBER	5. DEDICATED CREW CHIEF (DCC)
2. PILOT	6. ASST DCC
3.	7. ASST DCC
4. STANDARD REPORTING DESIGNATOR	8. ASST DCC
9.	

HOURS AND MINUTES TO HOUR AND TENTH CONVERSION TABLE								
	1 or 2 minutes	- .0 hour	21 thru 26 minutes	- .4 hour	46 thru 51 minutes	- .8 hour		
	3 thru 8 minutes	- .1 hour	27 thru 33 minutes	- .5 hour	52 thru 57 minutes	- .9 hour		
	9 thru 14 minutes	- .2 hour	34 thru 39 minutes	- .6 hour	58 thru 60 minutes	- Next whole hour		
	15 thru 20 minutes	- .3 hour	40 thru 45 minutes	- .7 hour				

10. DOD ACTIVITY ADDRESS CODE	11. CUSTOMER ID CODE	12. MISSION DESIGN SERIES	13. SERIAL NUMBER

14. ORGANIZATION	15. LOCATION	16. STATION CODE

17. SERVICE CAPACITY					18. INVENTORY DATA	COMMAND	PPIC
		INTERNAL	EXTERNAL	TOTAL	A		
A FUEL CAPACITY	POUNDS				ASSIGNMENT		
	'GALLONS OR LITERS'						
		EACH ENGINE	AUXILIARY TANKS		B		
B OIL CAPACITY HALF PINTS, PINTS, QUARTS, GALLONS OR LITERS					POSSESSION		

AFTO FORM 781F, 19990806 ***(EF-V1)*** **PREVIOUS EDITION IS OBSOLETE** **AEROSPACE VEHICLE FLIGHT REPORT AND MAINTENANCE RECORD**

H0000257

Figure 3-12. AFTO FORM 781F, Aerospace Vehicle Flight Status Report Maintenance Document

INSTRUCTIONS FOR AFTO FORM 781

AIRBORNE DUTY/POSITION SYMBOLS

PILOT

FP	- First Pilot
IP	- Instructor Pilot
CC	- Command Pilot
CP	- Co-Pilot
AC	- Auxiliary Pilot
RP	- Radio Control Pilot
OP	- Pilot systems Operator
EP	- Pilot Evaluator
OV	- Operational Evaluator

NAVIGATOR/OBSERVER

NN	- Navigator
NB	- Navigator-Bombardier
NI	- Weapon Systems Officer
NE	- Electronic Warfare Officer
IN	- Instructor Navigator
ID	- Instructor Navigator Bombardier
II	- Instructor Weapon Systems Officer
IE	- Instructor Electronic Warfare Officer
AN	- Auxiliary Navigator/Observer
CC	- Command
SV	- Systems Evaluator

FLIGHT SURGEON

FS	- Flight Surgeon

STUDENT

SP	- Student Pilot Solo (or First Pilot in Multi-Engine Aircraft)
SC	- Student Co-Pilot
SN	- Student Navigator

NONRATED

BO	- Boom Operator
AO	- Assistant Boom Operator
FM	- Flight Mechanic
HM	- Helicopter Mechanic
FE	- Flight Engineer
SE	- Systems Engineer
IC	- Intercept Controller
CS	- Communications System Operator
SO	- Radar Operator
EO	- ECM Operator
AW	- Aircraft and Warning Operations
TR	- Tow Reel Operator
AP	- Aerial Photographer
WR	- Weather Reconnaissance
RS	- Pararescue Man
LM	- Loadmaster
FT	- Inflight Passenger Specialist
FN	- Flight Nurse
MT	- Medical Technician
AG	- Aerial Gunner all positions
AB	- Airborne Battle Staff Duty
IS	- Instructor/Examiner
IO	- Illumination Operator
FF	- Firefighter
FI	- Navaid Flt. Insp. Tech.
AS	- Airborne Support

TYPE LANDING

LL	- Left Seat Landing on Hard Surface
RL	- Right Seat Landing on Hard Surface
TG	- Tough and Go Landing on Hard Surface
TN	- Touch and Go Landing at Night on Hard Surface
LN	- Left Seat Landing at Night on Hard Surface
RN	- Right Seat Landing at Night on Hard Surface
FL	- Front Seat Landing on Hard Surface
BL	- Back Seat Landing on Hard Surface
FN	- Front Seat Landing at Night on Hard Surface
BN	- Back Seat Landing at Night on Hard Surface
LW	- Left Seat Water Landing
RW	- Right Seat Water Landing
WN	- Left Seat Water Landing (Night)
WB	- Right Seat Water Landing (Night)
SS	- Ski Landing

JUMP CONDITION SYMBOLS

T	- Tactical or Operational
M	- Mass Tactical or Operational
A	- Administrative
C	- Combat
N	- Night
W	- Water
E	- Full Equipment
ES	- Ejection Seat
O	- Oxygen Procedures
F	- Free Fall
X	- Operational or test

PARACHUTIST

P	- Parachutist
M	- Jumpmaster
S	- Student Parachutist

INDIVIDUAL FLIGHT CHECKS

(for use in column E, Form 781)

Pilot	*Navigator/Observer*	*Non Rated*
PP - Qualification YP - Instrument	DP - Qualification	GP - Instrument

CREDIT CODES FOR USE IN COLUMN U, OF AFTO FORM 781

L	-	LEAVE STATUS
R	-	NOT CREDITABLE FOR PROFICIENCY
N	-	NOT CREDITABLE FOR PAY OR PROFICIENCY
T		SIMULATOR OR TRAINER

REMARKS GENERAL

T.O. 00-20-5, Section III is the prescribing directive for the preparation of AFTO Form 781, Columnar headings clarify each block to be filled in. The above flying duty symbols reflect the authorized codes to be used. A line entry will be filled in for each type of duty performed by the individual. Departure and arrival points; landing, takeoff, and elapsed times; total time; total landings, total sorties and mission symbol will be recorded in the spaces provided on AFTO Form 781.

AFTO FORM 781F, 19990806 ***(Reverse)***

H0000258

Figure 3-13. AFTO FORM 781F, Aerospace Vehicle Flight Status Report Maintenance Document (Reverse)

Instructions to pilots - Use only one mission symbol per AFTO Form 781. The flight authorization will indicate the authorized mission symbol *(or symbols)*.

CA CODED AIRCRAFT MISSION CLASSIFICATION

A1 SCHEDULED FLIGHTS: Missions in which the main goal is to move cargo/passengers on a scheduled frequency.
A2 SCHEDULED AIR EVACUATION FLIGHTS: Missions in which the main goal is to move patients who require immediate evacuation to the proper treatment facility.
A3 NONSCHEDULED AIR EVACUATION FLIGHTS: Missions in which the main goal is to move patients who require immediate evacuation to the proper treatment facility.
A4 NONSCHEDULED LOGISTICS: Missions in which the main goal is to move cargo/passengers on other than scheduled flights.
A5 POSITIONING/REPOSITIONING: The nonproductive part of a flight that is required to locate an aircraft at a station for onload or returning an aircraft to home station.
A6 TACTICAL TRAINING: Missions in which the main goal is nonscheduled joint airborne training that includes personnel and equipment/supply drops.
A7 OTHER: Classified and/or other special missions.

NOTE: Missions Symbols A1 through A7 are for CA coded aircraft use outside of a combat environment and ARRS CF coded aircraft.

SUPPORT MISSIONS

S-1-ADMINISTRATIVE: Missions in which the main purpose is aerial transportation of personnel accomplishing executive, administrative, and inspection functions. These include staff and command ordered flights. Also includes Air ROTC, Air Explorers, and CAP Indoctrination and similar flights.
S-2-PERSONNEL: Missions in which the main purpose is air movement of personnel. This symbol incudes courier flights. Does not include flights by MAC common user passenger/cargo transports accomplishing single manager operations for airlift services.
S-3-MATERIEL AND SUPPLIES: Missions in which the main purpose is air movement of materiel and supplies. Does not include flights MAC common user passenger/cargo transports accomplishing single manager operations for airlift services.
S-4-LOGISTICS: Missions in which the main purpose is air movement of personnel, materiel and supplies. This symbol includes flights in direct support of combat units and combat supporting unit operations. Does not include flights by MAC common user passenger/cargo transport.
S-5-SPECIAL: Missions in which the main purpose is to complete specific special activities of the Air Force and other governmental agencies, such as target missions for air defense purpose; tow missions for defense and tactical forces, and local search and rescue, civil relief, mercy missons and air demonstration flights.
S-6-NAVAIDS CHECKS: Mission in which the main purpose is flight-check radar and navigational aids.
S-7-AIRCREW QUALIFICATION: Missions in which aircrew members who occupy aircrew or instructor crew positions complete standardization and instrument check flights as well as qualifcation and currency checks.
S-8-SUPPORT TRAINING: Missions in which the purpose is to perform annual flying requirements, to include instrument, proficiency and other qualification checks as prescribed by AFR 60-1. This symbol is used by "behind-the-line" aircrews who are not assigned to MSL aircrew positions.

NOTE: Symbols S-1 through S-8 are used for Z coded operational support aircraft only.

TRAINING MISSIONS

T-1-STUDENT TRAINING: Missions in which the main goal is to instruct and train pilots and aircrews under the direction of the Air Training Command or other USAF activities engaged in formal student instruction (includes flying of instructors in the course of student training). Specific mission symbols within this category, may be designated locally.
T-2-COMBAT CREW TRAINING: Instructions and training of pilots and crews undergoing formal course of combat crew training in designated combat training organizations. Specific mission subsymbols within this category my be designated locally.
T-3-OPERATIONAL TRAINING: Missions in which the main goal is the accompishment of scheduled gunnery, bombing, reconnaissance, navigation, instrument, target missions for air defense purposes, towing targets, search and rescue, and transportation of cargo and/or personnel (excludes flight of MAC common user passenger/cargo transports accomplishing single manager opeations for airlift services). Specific missions within this category may be designated locally.
T-4-SPECIAL: Missions in which the main purpose is the direct support of nonmilitary activities in such areas as civil relief, mercy missions, health communications, public works and others contributing to the economic and social well-being of the nation.
T-5-AIRBORNE ALERT MISSIONS: See Note 1.
T-6-LOW LEVEL MISSIONS: See Note 1.

NOTE 1: Codes T-5 and T-6 are applicable to specific SAC aircraft.
NOTE 2: T symbols are used in force structure aircraft in assignment codes such as CB, CC, CF, CA, and TF.

OPERATIONS MISSIONS

O-1-COMBAT: Aerial activity engagements or attacks conducted by committee units or aircraft, under the operational control of a theater commander or other appropriate authority, which have as a primary purpose the expenditure of munitions or other destructive materiels against an enemy of the United States or an opposing foreign force or any flying activity in direct support thereof. Specific mission subsymbols, using numeric suffixs, may be designated locally.
O-2-COMBAT SUPPORT: Aerial activity or engagements conducted by committed units or aircraft, under the operational control of a theater commander or other appropriate authority, which have as a primary purpose the support of friendly foreign forces engaged in armed conflict, and which:
(1) Encounter foreign armed opposition, or
(2) Are otherwise placed in such a position that hostile action by armed forces was imminent even though it did not materialize.
O-3-AIRCRAFT DELIVERY: Aircraft delivery flights under the control of TAC, including intercommand transfers; USAF, Navy or other pilots attached to TAC for purposes of delivering aircraft are considered TAC aircraft delivery crews. This will include flying time accumulated by pilots assigned to the TAC aircraft delivery organizations as well as "borrowed" crews. Also includes aircraft deliveries other than under TAC control.
O-4-TEST: Missions in which the main goal is engineering testing of aerospace vehicles, to include the airframe, propulsion units, and components that are integral parts of the vehicle being test.
O-5-DIRECT TEST SUPPORT: Missions which are performed in direct support of research, development, test, or engineering. programs for the purpose of data acquisition. Includes flights to and from test locations.
O-6-INDIRECT TEST SUPPORT: Missions in which the main goal is the accomplishment of simulated mission profiles in preparation for approved test programs. Included in this category are missions in E, D, and CB coded aircraft in which the main goal is proficiency flying training, initial checkout, requalification, annual instrument and proficiency check, etc.
O-7-SPECIAL (AFLC, AFSC, AFCC use only): Missions performed in E and CF coded aircraft which do not fall within the categories explained above. Included are missions such as search and rescue, demonstrations, record attempts, flight inspection, traffic control and landing system (TRACALS) evaluations, and air traffic control operational evaluations.
O-8-MAINTENANCE TESTS: Missions in which the main goal is to perform functional check flights after completing inspections or maintenance to assure that the aircraft is airworthy and capable of mission accomplishment. This symbol applies to aircraft in all assignment codes.
O-9-OPERATIONAL RECONNAISSANCE: Aerial activity or engagements conducted by committed units or aircraft which have as a main purpose the accomplishment of higher headquarters directed reconnaissance missions that do not fall in the other categories explained above.
NOTE: For all missions flown into, or out of designated combat areas, the suffix A is used to provide differentiation of, and credit for actual combat flying time. The suffix B is used on designated combat missions, established by HQ USAF that result in personnel tour curtailment or other personnel actions.

AFTO FORM 781G, 19990806 ***(EF-V1-LRA)*** **PREVIOUS EDITION IS OBSOLETE** **GENERAL MISSION CLASSIFICATIONS - MISSION SYMBOLS**

H0000259

Figure 3-14. AFTO Form 781G, General Mission Classifications-Mission

INDUSTRIAL FUNDED AIRCRAFT MISSION CLASSIFICATIONS

L-1 through L-8 **CONTINGENCY:** Special transport missions that support contingency plans and test exercises. Symbol is assigned by HQ MAC in the Operation Order. If no OPORD is written, MAC Command Post (MCP) assigns symbol to be used.
M-1-CARGO: Scheduled transport missions in which the main goal is the movement of cargo.
M-2-PASSENGER/PATIENTS: Scheduled transport missions in which the main goal is the movement of passenger/patients.
M-3-CARGO/PASSENGERS: Scheduled transport missions in which the main goal is the movement of mixed loads (cargo/passengers).
M-4-POSITIONING FOR CHANNEL: Locating an aircraft at a station for channel traffic onload. This includes missions from the offload station of a special assignment airlift mission (SAAM) or contingency mission to the onload station of channel traffic mission.
M-5-DEPOSITIONING FOR CHANNEL: Returning an aircraft to home station from channel traffic offload station and to return an aircraft to backup positiion from .an offload or terminating point of any mission where backup equipment has been
M-6-SPECIAL ASSIGNMENT: Transport missions in which the main goal is the accomplishment of special assignment airlift missions. These missions will include hours logged from the time the aircraft departs from home station or is diverted from channel traffic (scheduled mission) until the aircraft returns to home station or returns to channel traffic, operations.
M-7-NONREVENUE: Nonscheduled missions operated in support of the airlift force other than exercises.
M-8-JOINT AIRBORNE OR AIR TRANSPORTABILITY TRAINING: Transport missions in which the main goal is nonscheduled joint airborne training.
N-1-TRAINING AND STANDARDIZATION: Training and standardization evaluation flights for personnel assigned or attached to a tactical or transport unit.
N-2-TACTICIAL TRAINING: Unilateral tactical training other than joint airborne training. This includes: airdrop, formation flying, and low level navigation training missions.
N-3-SEARCH: Industriallyfunded aircraft diverted to perform search missions. Symbol will be used starting with time of diversion until aircraft returns to normal mission
N-4 through N-8 RESERVED FOR FUTURE USE: These symbols will be used to complement the contingency mission symbols as assigned by MCP.

NOTE: L, M, and N symbols are used in force structure aircraft in assignment codes CC, CF, IF and TF.

SIMULATOR/TRAINER CLASSIFICATIONS

Q-1-STUDENT TRAINING: Instruction and training of pilots and crews under the direction of the Air Training Command or other USAF ogranization engaged in formal student instruction.
Q-2-MISSION TRAINING: Synthetic trainer/simulator missions in which the main goal is training of tactical and support aircrews.
Q-3-MAINTENANCE TESTS: Performance of functional check lights.
Q-4-OPERATIONAL TRAINING: Simulator time logged during a formal course of training that is creditable to operational flying duty.
Q-5-SIMULATOR TEST: Missions for the acquisition of data or verification of simulator performance, handling qualities, and systems.

Suffix "E" is reserved for engineering tests for the purpose of simulator hardware/software design or development.
Suffix "F" is reserved for missions scheduled in direct support of personnel research.

AFTO FORM 781G, 19990806 *(Reverse)*

H0000260

Figure 3-15. AFTO FORM 781G, General Mission Classifications-Mission (Reverse)

1. FROM	2. TO	3. MDS	4. SERIAL NUMBER

5. Certification of PR, PR/BPO, PR/TH, TH, BPO, QT, ICT, WAI, PLI

FLT NO	TYPE	ACCOMPLISHED BY	COMPLETED DATE	COMPLETED TIME	FLT NO	TYPE	ACCOMPLISHED BY	COMPLETED DATE	COMPLETED TIME

6. STATUS DATA

SEE AFTO FORMS 781A AND 781K FOR EXPLANATION OF THE STATUS SYMBOLS

STATUS TODAY		BOX NO	EXCEPTIONAL RELEASE (Enter Box No)
1	13		
2	14		
3	15		
4	16		
5	17		
6	18		
7	19		
8	20		
9	21		
10	22		
11	23		
12	24		

7. FLIGHT CONDITION DATA

FLT NO	COND AFT FLT	PILOT'S SIGNATUARE (Enter After Each Flight)	OVER TEMP ENCTRD	AUX ENG OR APU OPERATION
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

8. MUNITIONS/ GUNS STATUS	STATUS 781A ENTRY	L E N P I	L E N P I	L E N P I	L E N P I	L E N P I	L E N P I	TOTAL TODAY	

9. AIRFRAME TIME		10. LANDINGS FULL STOP	10. LANDINGS TOTAL	11. CART/JFS STARTS NO	11. CART/JFS STARTS ENG	NO	ENG	12. ENGINE CYCLE DOCUMENTATION NO 1 ENG	NO 2 ENG	NO 3 ENG	NO 4 ENG	NO 5 ENG	NO 6 ENG	NO 7 ENG	NO 8 ENG
PREVIOUS															
FLIGHTS 1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
TOTAL															

PREVIOUS EDITION IS OBSOLETE

AFTO FORM 781H, 19990806 *(EF-V1)* **AEROSPACE VEHICLE FLIGHT STATUS AND MAINTENANCE**

H0000261

Figure 3-16. AFTO FORM 781H, Aerospace Vehicle Flight Status and Maintenance Document

13. SERVICING DATA

	FUEL (*Pounds, Gallons or Liters*)			OIL (*Half pints, pints, quarts, gallons or liters*)																OXY PRESS OR QTY	NITROGEN	WATER
	OCTANE OR GRADE	QTY SRVCD	TOTAL IN TANKS	1		2		3		4		5		6		7		8				
				SER	IN	SER	IN	SER	IN	SER	IN	SER	IN	SER	IN	SER	IN	SER	IN			
Pre Tot																						
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
17																						
18																						

14. SERVICING CERTIFICATION (*Signature, Employee Number, and Station at Which Servicing is Accomplished*)

1	BY			7	BY			13	BY				
	AT		DATE		AT		DATE		AT		DATE		
2	BY			8	BY			14	BY				
	AT		DATE		AT		DATE		AT		DATE		
3	BY			9	BY			15	BY				
	AT		DATE		AT		DATE		AT		DATE		
4	BY			10	BY			16	BY				
	AT		DATE		AT		DATE		AT		DATE		
5	BY			11	BY			17	BY				
	AT		DATE		AT		DATE		AT		DATE		
6	BY			12	BY			18	BY				
	AT		DATE		AT		DATE		AT		DATE		

AFTO FORM 781H, 19990806 *(Reverse)*

H0000262

Figure 3-17. AFTO FORM 781H, Aerospace Vehicle Flight Status and Maintenance Document (Reverse)

FROM	TO	MDS	SERIAL NO.	PAGE	OF	PAGES

AIRCRAFT AND ENGINE OPERATING TIME, CYCLE AND OIL ADDED *(Half Pints, Pints, Quarts)*

DATE	AIRFRAME TIME	OIL SAMPLE (x)	ENGINE POS #			ENGINE POS #			ENGINE POS #			ENGINE POS #		
			OIL ADDED	OIL CHANGE TIME		OIL ADDED	OIL CHANGE TIME		OIL ADDED	OIL CHANGE TIME		OIL ADDED	OIL CHANGE TIME	
				ENGINE TIME	CYCLES		ENGINE TIME	CYCLES		ENGINE TIME	CYCLES		ENGINE TIME	CYCLES
PREVIOUS TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
CARRIED FORWARD														

AFTO FORM 781J, 19990603 *(EF-V2)* **PREVIOUS EDITION IS OBSOLETE** **AEROSPACE VEHICLE - ENGINE FLIGHT**

H0000263

Figure 3-18. AFTO FORM 781J, Aerospace Vehicle Engine Flight Document

AIRCRAFT AND ENGINE OPERATING TIME, CYCLE AND OIL ADDED *(Half Pints, Pints, Quarts)*

DATE	AIRFRAME TIME	OIL SAMPLE (X)	ENGINE POS #			ENGINE POS #			ENGINE POS #			ENGINE POS #		
			OIL ADDED	OIL CHANGE TIME		OIL ADDED	OIL CHANGE TIME		OIL ADDED	OIL CHANGE TIME		OIL ADDED	OIL CHANGE TIME	
				ENGINE TIME	CYCLES		ENGINE TIME	CYCLES		ENGINE TIME	CYCLES		ENGINE TIME	CYCLES
PREVIOUS TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
TOTAL														
CARRIED FORWARD														

AFTO FORM 781J, 19990603 ***(Reverse)***

H0000264

Figure 3-19. AFTO FORM 781J, Aerospace Vehicle Engine Flight Document (Reverse)

FROM	TO	MDS	SERIAL NUMBER

A. AEROSPACE INSPECTION STATUS					B. ENGINE DATA					
NEXT PERIODIC, MAJOR, OR PHASED INSPECTION DUE NO.					PSN	ENG SER NO	ENG CHANGE DUE TIME	PSN	ENG SER NO	ENG CHANGE DUE TIME
TYPE	COMPL	NEXT DUE	COMPL	NEXT DUE	1			5		
					2			6		
					3			7		
					4			8		

C. CALENDAR AND HOURLY INSPECTION SCHEDULE

INSPECTION ITEM	FREQUENCY	NEXT DUE	NEXT DUE	NEXT DUE	NEXT DUE

PREVIOUS EDITION IS OBSOLETE

AFTO FORM 781K, 19990806 *(EF-V1)*

AEROSPACE VEHICLE INSPECTION, ENGINE DATA, CALENDAR INSPECTION AND DELAYED DISCREPANCY DOCUMENT

H0000265

Figure 3-20. AFTO FORM 781K, Aerospace Vehicle Inspection, Engine Data, Calendar Inspection and Delayed Discrepancy Document

D. DELAYED DISCREPANCIES, URGENT ACTION, AND OUTSTANDING ROUTINE ACTION TCTO's					
SYM	JOB CONTROL NUMBER	DELAYED DISCREPANCIES OR TCTO NUMBER AND PUBLICATION DATE	DOCUMENT NUMBER	GROUND DATE/TIME	TRANSFER BY EMPLOYEE NUMBER
OPEN ITEMS CARRIED FORWARDED TO NEW AFTO FORM 781K		SIGNATURE and EMPLOYEE NO.			

AFTO FORM 781K, 19990806 *(Reverse)*

H0000266

Figure 3-21. AFTO FORM 781K, Aerospace Vehicle Inspection, Engine Data, Calendar Inspection and Delayed Discrepancy Document (Reverse)

PART I - UNIT, BASE, AND EQUIPMENT INFORMATION	
OWNING UNIT AND BASE	
UNIT AND BASE PERFORMING MAINTENANCE	
MDS/SRD	
END ITEM SERIAL OR TAIL NUMBER	POSITION NUMBER
PART II - CCI INFORMATION	
SECTION A - REMOVED CCI INFORMATION	**SECTION B- INSTALLED CCI INFORMATION**
MODEL/TYPE	MODEL/TYPE
NSN	NSN
COMPLETE CCI SERIAL NUMBER	COMPLETE CCI SERIAL NUMBER
ACCOUNT/DOCUMENT NUMBER *(Optional)*	DATE INSTALLED
CUSTODIAN *(Optional)*	ACCOUNT NUMBER *(Optional)*
NAME/PHONE	NAME/PHONE
PART III - GENERAL COMMENTS	
SERIAL NUMBERS VERIFIED BY	
REMARKS *(Optional)*	

PREVIOUS EDITION IS OBSOLETE

AFTO FORM 781L, 19990806 *(EF-V1)* **RECORD OF REMOVAL/INSTALLATION OF CONTROLLED CRYPTOGRAPHIC ITEMS (CCI)**

H0000267

Figure 3-22. AFTO FORM 781L, Record of Removal/Installation of Controlled Cryptographic Items (CCI)

SYSTEM NUMBERS, GENERAL GROUPING, AND SYSTEM TITLES

AIRCRAFT SUPPORT GENERAL:

01 Ground Handling, Servicing and Related Tasks.

02 Aircraft Cleaning - Includes washing, decontamination corrosion control, ground frost, ice removal, etc.

03 "Look" Phase of Scheduled Inspection - Includes all work such as greasing, etc., included on work cards and minor fixes such as tightening clamps and connections and unbuttoning and buttoning up the aircraft.

04 "Look" Phase of Special Inspections - Includes items of work as defined for 03 above.

05 Preservation, Depreservation, and Storage of Aircraft, Engines, and Associated Equipment.

06 Ground Safety - Includes disarm and rearm seat, canopy, and other explosive squibs and disconnect or reconnect battery.

07 Preparation and Maintenance of Records.

09 Shop Support General.

AIRCRAFT BASIC:

11 Airframe

12 Cockpit and Fuselage Compartments

13 Landing Gear

14 Flight Control

15 Helicopter Rotor System *(Rotors, Hub Controls)*

16 Escape Capsule

17 Aerial Recovery System

18 Verticle or Short Take Off and Landing *(V/STOL)* Power and Control Transmission System.

POWER PLANTS:

19 Engine Starting

21 Reciprocating Power Plant

22 Turbo-Prop/Turbo Shaft Power Plant

23 Turbo-Jet or Turbo-Fan Power Plant

24 Auxiliary Power Plant

25 Rocket Power Plant

26 Helicopter Rotary Wing Drive System

27 Turbo-Jet or Turbo-Fan Power Plant *(Accessory Gear Box (B-1 Only))*

PROPELLERS

31 Electric

32 Hydraulic

33 Electro-Hydraulic

34 Mechanical and Fixed Pitch

UTILITIES:

39 Ice and Rain Protection

41 Air Conditioning, Pressurization, and Surface Ice Control

42 Electrical Power Supply

43 Electrical Multiplex *(EMUX)*

44 Lighting Systems

45 Hydraulic and Pneumatic Power Supply

46 Fuel System

47 Oxygen System

48 Indicating/Recording

49 Miscellaneous Utilities - Includes fire extinguishing, fire detection, water, personnel warning, overheat warning, JATO systems and VGH Recording Systems.

INSTRUMENTATION:

50 Cockpit Management Systems

51 Instruments

52 Auto Pilot

53 Drone Airborne Launch and Guidance System

54 Telemetry

55 Malfunction Analysis and Recording Equipment

56 Automatic All Weather Landing System

57 Integrated Guidance and Flight Control - Includes Auto Pilot When Part of Integrated System

COMMUNICATION EQUIPMENT:

58 MILSTAR Terminal Segment

59 Crew Communications

60 VLF/LF Communication

61 HF Communication

62 VHF Communication

63 UHF Communication

64 Interphone, Audio Switching, and Recording

65 IFF/SIF

66 Emergency Communications

67 SHF/EHF

68 AFSATCOM

69 Miscellaneous Communications Equipment

NAVIGATION, BOMB-NAV, FIRE CONTROL WEAPONS DELIVERY, ELECTRONIC COUNTERMEASURES, PHOTOGRAPHIC:

70 Nuclear Detection

71 Radio Navigation

72 Radar Navigation

73 Bombing Navigation

74 Fire Control

75 Weapons Delivery

76 Electronic Countermeasures

77 Photographic/Reconnaissance

78 Electronic Countermeasures

81 Airborne Command and Control Surveillance Radar *(AWACS)*

MISCELLANEOUS EQUIPMENT:

82 Computer and Data Display *(Graphic)*

89 Airborne Battlefield Command Control Center *(capsule)*

91 Emergency Equipment

92 Tow Target Equipment

93 Drag Chute Equipment

94 Meterological Equipment

95 Smoke Generator, Scoring and Target Area Augmentation Systems and Airborne Cooperational Equipment

96 Personnel and Miscellaneous Equipment

97 Explosive Devices and Components *(Excluding Nuclear)*

98 Atmospheric Research Equipment

PREVIOUS EDITION IS OBSOLETE

AFTO FORM 781M, 19990806 *(EF-V1-LRA)* **STATUS SYMBOLS AND FUNCTIONAL SYSTEM CODES**

H0000268

Figure 3-23. AFTO FORM 781M, Status Symbols and Functional System Codes

CODES FOR AFTO FORM 781A ENTRIES	STATUS SYMBOLS
PILOT WILL REPORT ON: A. Forced landings due to weather or other nonmaterial failures. B. Forced landings resulting from mechanical or material failures. C. Extremely hard landings. D. Exceeding of airspeed limitations. E. Overtemperatures encountered on jet engines. **WHEN DISCOVERED CODES:** A. Before Flight - Abort B. Before Flight - No Abort C. In Flight - Abort *(For aircraft this includes precautionary landings at the home station, intermediate station or final destination as a result of an inflight malfunction.)* D. In-Flight- No Abort/During AGE Operation E. After Flight F. Between Flights - Ground Crew *(when not associated with an inspection)*/During Unscheduled Maintenance *(AGE)* G. Ground Alert - Not Degraded/AIM 270 Day Checkout/AGM 18 Month Checkout H. Basic Postflight, Thru flight or Alert Exercise Postflight Inspection / AIM 30 Day Checkout/AIM 30 Day Storage Inspection J. Preflight or Combined Preflight/Postflight or End of Runway Inspections K. Hourly Postflight Inspection/Minor Inspection - Isochronal/AIM 120 Day Checkout/AGM Combined Systems Checkout/AGM 45 Day Checkout L. During Training or Maintenance on Training Equipment M. Periodic / Phased / Major Isochronal Inspection / AIM 180 Day Checkout/60 Day GMT Inspection/AGM/TGM 12 Month Checkout N. Ground Alert - Degraded/AIM 360 Day Checkout/AGM 24 Month Checkout P. Functional Check Flight Q. Special Inspection R. Quality Control Check S. Depot Level Maintenance T. During Scheduled Calibration U. Oil Analysis V. During Unscheduled Calibration W. In-Shop Repair and/or Disassembly for Maintenance X. Engine Test Stand Operation Y. Upon Receipt or Withdrawal from Supply Stocks Z. "AGM Under Wing Check" Use of this code for aircraft equipped with MADREC should be limited to discrepancies discovered through analysis of MADREC tape 1. Magnetic Particle 2. During Operation of Malfunction Analysis and Recording Equipment or Subsequent Data Analysis 3. Eddy Current	**STATUS SYMBOLS:** **RED X:** This symbol grounds the aircraft: maintenance required is of a serious nature and endangers the operation of the aircraft. No one will authorize or direct that an aircraft will be flown until the red x is properly cleared. **RED DASH:** This symbol indicates that a required inspection has not been performed. **RED DIAGONAL:** This symbol indicates that an unsatisfactory condition exists on the aircraft or equipment; but, is not sufficiently urgent or dangerous to warrant grounding the aircraft or discontinuing use of the equipment. **BLACK LAST NAME INITIAL:** The initial placed over a red X, red dash, or red diagonal means that the trouble has been corrected. A symbol will never be placed over the initial.. **NOTE:** When a red dash or red diagonal is used, the Aircraft Maintenance Officer, Aircraft Maintenance Superintendent or Pilot or other authorized individual will authorize a flight by signing the exceptional release. Such authorization indicates that the individual has investigated the nature and extent of the defect(s) and assumes full responsibility for mechanical safety in flight.

AFTO FORM 781M, 19990806 ***(Reverse)***

H0000269

Figure 3-24. AFTO FORM 781M, Status Symbols and Functional System Codes (Reverse)

Date _____
Engine S/N _____
Engine Time TSN/TSO _____
Reason for Run _____
Engine Inspected for FOD _____
Engine Rigging Checked _____
EGT Harness & Cockpit Ind. Check _____
OAT _____ °C _____ °F

NOTE

Insure the following requirements are/have been accomplished:

a. T.O. 1F-4(R)C-2-8, Fig 2-22, 2-23, 2-24
b. T.O. 1F-4C-2-8, Fig 2-22, 2-23, 2-24
c. T.O. 1F-4D-2-8, Fig 2-22, 2-23, 2-24
d. T.O. 1F-4E-2-8, Fig 2-22, 2-23, 2-24
e. T.O. 1F-4G-2-8, Fig 2-24, 2-25, 2-26

RUN DATA

Start — Fuel Flow _____ PPH
Lite-Off Time _____ Sec
Max EGT _____ °C _____ °F
Idle — RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____
Military *(T5 Shorting Switch Installed)*
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL

Adjust RPM per T.O. 1F-4( )2-8 Section 4.

Adjust EGT to 625 ± 10°C per T.O. 1F-4C/D-2-8

Adjust T5 to 590°C per T.O. 1F-4-E/G-2-8

Military *(System Normal)*
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Afterburner
Lite-Off Time _____ Sec
RPM Rollback _____ %
Recovery Time _____ Sec

Max Afterburner Stabilized
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Accel Check
Idle to Mil _____ Sec

Org. _____

Signature _____

Date _____
Engine S/N _____
Engine Time TSN/TSO _____
Reason for Run _____
Engine Inspected for FOD _____
Engine Rigging Checked _____
EGT Harness & Cockpit Ind. Check _____
OAT _____ °C _____ °F

NOTE

Insure the following requirements are/have been accomplished:

a. T.O. 1F-4(R)C-2-8, Fig 2-22, 2-23, 2-24
b. T.O. 1F-4C-2-8, Fig 2-22, 2-23, 2-24
c. T.O. 1F-4D-2-8, Fig 2-22, 2-23, 2-24
d. T.O. 1F-4E-2-8, Fig 2-22, 2-23, 2-24
e. T.O. 1F-4G-2-8, Fig 2-24, 2-25, 2-26

RUN DATA

Start — Fuel Flow _____ PPH
Lite-Off Time _____ Sec
Max EGT _____ °C _____ °F
Idle — RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____
Military *(T5 Shorting Switch Installed)*
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL

Adjust RPM per T.O. 1F-4( )2-8 Section 4.

Adjust EGT to 625 ± 10°C per T.O. 1F-4C/D-2-8

Adjust T5 to 590°C per T.O. 1F-4-E/G-2-8

Military *(System Normal)*
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Afterburner
Lite-Off Time _____ Sec
RPM Rollback _____ %
Recovery Time _____ Sec

Max Afterburner Stabilized
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Accel Check
Idle to Mil _____ Sec

Org. _____

Signature _____

AFTO FORM 781N, 19990806 *(EF-V1-LRA)* **PREVIOUS EDITION IS OBSOLETE** **J-9 ENGINE RUN-UP RECORD**

H0000270

Figure 3-25. AFTO FORM 781N, J-9 Engine Run-Up Record

Date _____
Engine S/N _____
Engine Time TSN/TSO _____
Reason for Run _____
Engine Inspected for FOD _____
Engine Rigging Checked _____
EGT Harness & Cockpit Ind. Check _____
OAT _____ °C _____ °F

NOTE

Insure the following requirements are/have been accomplished:

a. T.O. 1F-4(R)C-2-8, Fig 2-22, 2-23, 2-24
b. T.O. 1F-4C-2-8, Fig 2-22, 2-23, 2-24
c. T.O. 1F-4D-2-8, Fig 2-22, 2-23, 2-24
d. T.O. 1F-4E-2-8, Fig 2-22, 2-23, 2-24
e. T.O. 1F-4G-2-8, Fig 2-24, 2-25, 2-26

RUN DATA

Start
Fuel Flow _____ PPH
Lite-Off Time _____ Sec
Max EGT _____ °C _____ °F

Idle
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Military *(T5 Shorting Switch Installed)*
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL

Adjust RPM per T.O. 1F-4( )2-8 Section 4.

Adjust EGT to 625 ± 10°C per T.O. 1F-4C/D-2-8

Adjust T5 to 590°C per T.O. 1F-4-E/G-2-8

Military *(System Normal)*
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Afterburner
Lite-Off Time _____ Sec
RPM Rollback _____ %
Recovery Time _____ Sec

Max Afterburner Stabilized
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Accel Check
Idle to Mil _____ Sec

Org. _____

Signature _____

Date _____
Engine S/N _____
Engine Time TSN/TSO _____
Reason for Run _____
Engine Inspected for FOD _____
Engine Rigging Checked _____
EGT Harness & Cockpit Ind. Check _____
OAT _____ °C _____ °F

NOTE

Insure the following requirements are/have been accomplished:

a. T.O. 1F-4(R)C-2-8, Fig 2-22, 2-23, 2-24
b. T.O. 1F-4C-2-8, Fig 2-22, 2-23, 2-24
c. T.O. 1F-4D-2-8, Fig 2-22, 2-23, 2-24
d. T.O. 1F-4E-2-8, Fig 2-22, 2-23, 2-24
e. T.O. 1F-4G-2-8, Fig 2-24, 2-25, 2-26

RUN DATA

Start
Fuel Flow _____ PPH
Lite-Off Time _____ Sec
Max EGT _____ °C _____ °F

Idle
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Military *(T5 Shorting Switch Installed)*
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL

Adjust RPM per T.O. 1F-4( )2-8 Section 4.

Adjust EGT to 625 ± 10°C per T.O. 1F-4C/D-2-8

Adjust T5 to 590°C per T.O. 1F-4-E/G-2-8

Military *(System Normal)*
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Afterburner
Lite-Off Time _____ Sec
RPM Rollback _____ %
Recovery Time _____ Sec

Max Afterburner Stabilized
RPM _____ % Indicator _____ % JET-CAL
EGT _____ °C Indicator _____ °C JET-CAL
Fuel Flow _____ PPH
Oil Press _____ PSI
Noz Position _____

Accel Check
Idle to Mil _____ Sec

Org. _____

Signature _____

AFTO FORM 781N,19990806 ***(Reverse)***

H0000271

Figure 3-26. AFTO FORM 781N, J-9 Engine Run-Up Record (Reverse)

1. DATE	2. TO	3. JOB CONTROL NO.	4. WORK CENTER	5. ID NO	6. SRD	7. CAT LAB

MAINTENANCE ACTION	JOB COMPLETIONS																														8. CODE	9. TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		

AFTO FORM 781P,19990806 ***(EF-V1)*** **PREVIOUS EDITION IS OBSOLETE** **SUPPORT GENERAL DOCUMENTATION RECORD**

H0000272

Figure 3-27. AFTO FORM 781P, Support General Documentation Record

CHAPTER 4

MAINTENANCE HISTORICAL DOCUMENTATION

4-1 NON-AUTOMATED PROCEDURES.

4-1.1 When automated data systems are not available, collect data manually in such detail that automated systems may be updated, when practical. Only if an automated system is not available, use the AFTO FORMS described in this section.

4-1.2 Aircraft and engines maintained under FAA rules may use Airframe and Engine Log Books in lieu of automated history or AFTO FORM 95 as long as use is consistent. When any system or item is being shipped off-base or to DRMO, include a hard copy of the historical documentation. A historical printout from REMIS or CEMS suffices for this requirement.

4-2 GENERAL MAINTENANCE HISTORICAL DOCUMENTATION REQUIREMENTS.

4-2.1 Purpose: This chapter prescribes the requirements for historical documentation. Historical Documentation is the permanent record of significant maintenance actions on end items of equipment including, but not limited to aerospace vehicles, engines, engine modules, and designated -6 TO components. This information will accompany the equipment upon transfer, and in the case of Flight Safety Critical Aircraft Parts (FSCAP), into the disposal system.

4-2.2 Item Managers determine which items in the -6 TO need historical reporting, and informing the SM so they can be identified.

4-2.3 Documentation is applicable to field and organic or contractor depot-level activities.

4-2.4 Ship documentation with the aerospace vehicle or component to disposal, storage activity, next using activity, or depot, unless otherwise directed.

4-2.5 Actions to be Documented. Use the following guidelines for the documentation of historical events.

4-2.5.1 TCTO compliance if not recorded in the automated TCTO reporting process. TCTO non-compliance due to modified or removed systems in which an AF FORM 1067 was approved by MAJCOM. All AF FORMS 1067 must be maintained in the aircraft's historical forms.

4-2.5.2 Time Change Items when not recorded in an automated MDD reporting process.

4-2.5.3 Removal and replacement of aircraft fracture critical structure including fixed wings and stabilizers.

4-2.5.4 Remarks concerning special service test equipment installed or removed.

4-2.5.5 Data on severe corrosion, its location, extent, and treatment accomplished or required.

4-2.5.6 Circumstances regarding mishaps, the extent of damage, and repairs accomplished.

4-2.5.7 Weather damage to aerospace vehicles.

4-2.5.8 Data on overstresses and hard landings.

4-2.5.9 Data on damage to fracture critical structure including fatigue-related damage, the location and extent of the damage, repairs accomplished, repair authority, repairing activity, and date of repair. Include data concerning special requirements, procedures, and intervals.

4-2.5.10 Weapon System/Component Unique Reporting Requirements. The following reporting requirements are specific to various weapon systems.

4-2.5.10.1 Engine reporting requirements.

NOTE

Historical documentation for parts-tracked engines (includes modular engines) will be in accordance with the 00-20-5-1 series TOs.

4-2.5.10.1.1 Enter the aerospace vehicle serial number, vehicle total time, and engine position on the engine record at time of installation. If the engine is not zero time, include the previous operating time.

4-2.5.10.1.2 Upon engine removal, enter the new vehicle total time and Time Since Overhaul.

4-2.5.10.1.3 The engine record contains the engine time at removal, or the time at transfer if different.

4-2.5.10.1.4 Bases with modular engines record the Total Operating Time and a new total low cycle fatigue. Report the engine cycles when the compressor or compressor disks are removed. Cycle records are only applicable to those engines noted in the -6 manual. The method for determining cycles is outlined in the -1 or -2 manuals.

4-2.5.10.1.5 Record the replacement of time recording devices on the historical record. Record the operating time from the removed meter, and the time on the new meter if more than zero.

4-2.5.10.1.6 Set the engine time to zero on the historical records for engines processed through the organic or contractor depot for overhaul.

4-2.5.10.1.7 Do not zero engine components having a maximum life based on cycles or time in the -6 manual.

4-2.5.10.1.8 Engine historical records must contain entries for foreign object damage, internal damage, overspeed, overtemperature, or removal of components for maximum service life.

4-2.5.10.1.9 Record removal and replacement of engine accessories, defined as class A-2 and B-2 accessories in TO 00-20-1, the history record of the engine.

4-2.5.10.1.10 Supplemental historical records are required for engine components listed in the -6. These supplemental records must remain with the engine while the components are installed and must be updated and forwarded when the component is removed. These records must contain the total operating time for the component and the cycles, as applicable. The supplemental record must contain the engine serial number as well as the component serial number.

4-2.5.10.1.11 Document the total accumulated cycle entry for each record immediately following, and on the same line as the total time. This line should read as follows: TT _____, TSO _____, Cycles _____.

4-2.5.10.1.12 For modular engines, record a line entry indicating the reason for a test stand run and results historical record.

4-2.5.10.1.13 Initiate a history record for Quick Engine Change (QEC) kits for applicable aircraft.

4-2.5.10.2 For guns and gun barrels, the history record will contain the number of rounds fired.

4-3 FLIGHT SAFETY CRITICAL AIRCRAFT PARTS (FSCAP) PROGRAM.

4-3.1 FSCAP is a joint DoD, FAA, and Coast Guard program designed to provide maintenance history with selected parts that are sent to the Defense Reutilization and Marketing Office (DRMO). The program is designed to prevent questionable parts from reentering the government or civilian aircraft market as fully serviceable items.

4-3.2 Once a part has been designated as a FSCAP item, it must be either in its original package or have the acceptable maintenance history with it when it goes to DRMO.

4-3.3 If the part is not serviceable, DRMO must mutilate it beyond further use.

4-3.4 FSCAP designated items must have either an AFTO FORM 95 or its equivalent when being sent to DRMO. If the maintenance history is not available, so indicate in the "REMARKS" section of the condition tag so supply will not request the information from maintenance. Maintenance ensures this information is shipped with the item, if available.

4-4 Deleted.

4-4.1 Deleted.

4-4.2 Deleted.

4-4.3 Deleted.

4-5 AFTO FORM 95, SIGNIFICANT HISTORICAL RECORD (FIGURE 4-1).

4-5.1 The AFTO FORM 95 is a document for maintaining a permanent history of significant maintenance actions on end items of equipment including but not limited to aerospace vehicles, engines, engine modules and designated -6 TO components. As a minimum, annotate the installation/removal dates and component accumulated hours, reason for removal and a brief narrative as to the maintenance performed on the component (i.e., unit overhauled; unit cleaned, inspected and repaired; replaced minor parts, TCTO's completed, and scheduled maintenance complied with. This information should portray those conditions that could have a bearing on future maintenance or tracking of the equipment/component. For engines, printed copies of AFTO FORMS 95 are not required to accompany end items upon transfer to/from locations that have access to the necessary data bases to retrieve the historical information. In the case of helicopter blades and tail rotor blades, a printed copy is required to accompany them into the disposal system. Enter specific information concerning maintenance actions on the 781 series forms prescribed in other chapters of this TO, however, these forms are of a temporary or specialized nature. The AFTO FORM 95 is a permanent document of those significant actions and provides the maintenance organization with a life profile of the item. As a minimum, this information should portray those conditions that could have a bearing on future maintenance of the equipment. For Communications Electronics equipment requirements see paragraph 2-21.

4-5.2 Item Managers (IMs) determine which items in the -6 require AFTO FORMS 95 and informing applicable single manager (SM) so the items can be properly identified.

4-5.3 The AFTO FORM 95 or other historical records are not required on COMSEC equipment identified for limited maintenance. A limited maintenance activity is restricted to replacing plug-in elements, assemblies, or end item equipment. This equipment is identified in the applicable limited maintenance cryptographic maintenance manual. Using MAJCOMs are not authorized to perform modification on this COMSEC equipment beyond replacing complete line replacement units or applying decals. All modifications and significant maintenance actions are performed at the depot maintenance activity. The official record of all modifications is the Mod Record Plate affixed to each equipment, and supportive data contained in the TCTO data files.

4-5.4 When engines are shipped to or from the depot, the maintenance facility that preserves the engine insures that all basic engine components have been accounted for. Make an entry on the AFTO FORM 95 verifying that the basic items listed in TO W-1-24 have been included. This will include the name, rank, base, office symbol, and telephone extension of the person making the verification. Make a separate entry for all missing items listing the National Stock Number (NSN), nomenclature, disposition of the removed part, and justification for the missing part not being included. When an automated AFTO FORM 95 is used, this requirement still applies. In addition, when an engine is shipped to a depot CAMS Transaction Identifier Code (TRIC) "SHD" will be used to obtain the automated record to accompany it.

4-5.5 Use the AFTO FORM 95 to document accumulated cycles, operating time, and maintenance history, as well as pertinent manufacturing data for jet engine turbine wheels. The manufacturer will accomplish the AFTO FORMS 95 upon delivery of turbine wheels or engines in accordance with contractual requirements. Using organizations will initiate and maintain the AFTO FORM 95 for all turbine wheels assigned. The documentation section supervisor in conjunction with the supervisor of the facility performing maintenance on the engines in which the turbine wheels are installed, will maintain the AFTO FORM 95.

4-5.5.1 The use of the AFTO FORM 95 is mandatory for certain selected afterburner/augmentors/jet engines as indicated by the applicable -6 scheduled inspection and maintenance requirements manual. Use the form in units where jet engines, jet engine adjustable nozzles or thrust reversers are involved in frequent rotation from one aerospace vehicle to another. When documenting afterburner data for the J-79-15/17, the installation and operating time data section will reflect sorties rather than time in the applicable blocks.

4-5.5.2 This form will normally serve as a cover sheet for the AFTO FORM 781E. However, when the type aerospace vehicle and mission dictates a different forms management procedure, carry the AFTO FORM 95 in the AFTO FORM 781 binder. When the AFTO FORM 95 is used, a new AFTO FORM 781E is not required each time the affected components are changed. This form will provide a history of previous operating time for reference use during intermediate repair when the engine documents are separated from any aerospace

vehicle documents, and will facilitate updating the AFTO FORM 781E. Make entries in columns F, G, and H of the related AFTO FORMS 781E in terms of engine operating time when the AFTO FORM 95 is attached.

4-5.5.3 Use the AFTO FORM 95 to record the built-up engine weight and the weight of afterburners/ augmentors. Consult TO 1-1B-50 for the listing of certain aerospace vehicles that do not require an entry in CHART C of the weight and balance book for engines or afterburner/augmentors. For those aerospace vehicles that are not greatly affected by weight variations caused by the replacement of jet engines or afterburners/augmentors, the entry is not required.

4-6 AFTO FORM 95, ENTRIES.

4-6.1 "PAGE OF PAGES." Enter the appropriate page numbers.

4-6.2 BLOCK I, "MISSION DESIGN SERIES/TYPE, MODEL AND SERIES." Enter the mission, design, series (MDS) or type designator of the weapon system or equipment. Enter the part number assigned to the item. For quick-engine change kits, enter the term "QEC." For helicopter blades and tail rotors enter the NSN and part number.

4-6.3 BLOCK 2, "MANUFACTURER." Enter the name of the manufacturer. For helicopter blades and tail rotor blades, the date of manufacture will follow the name.

4-6.4 BLOCK 3, "SERIAL NUMBER." When assigned, enter the serial number of the item identified in block 1. Example: 85-1428, 64-14828.

4-6.5 BLOCK 4, "ACCEPTANCE DATE." Enter the date the equipment was accepted by the Air Force. If unknown, enter "unknown."

4-6.5.1 COLUMN A, "DATE." Enter the date the maintenance action or inspection is accomplished.

4-6.5.2 COLUMN B, "REMARKS." Enter the applicable information, using as many lines as necessary, to document significant data.

4-7 AFTO FORM 95, SPECIAL APPLICATIONS.

The MAJCOM or GP/CC may prescribe additional uses of the AFTO FORM 95. Forms prepared and maintained for MAJCOM or GP/CC requirements will accompany the equipment upon transfer. However, upon review of the forms package, dispose of these forms IAW AFI 37-138, if not required. When such forms are forwarded with the equipment to overhaul facilities, update by the overhaul facility is not mandatory.

4-8 AFTO FORM 427 OR 428, AIRCRAFT INTEGRAL FUEL TANK REPAIR HISTORICAL DATA.

Document data regarding temporary repair of fuel leaks in integral wing tanks on the forms as prescribed in TO 1-1-3.

4-9 MAINTENANCE AND DISPOSITION OF HISTORICAL RECORDS.

4-9.1 Overhaul activity personnel will, at the completion of an weapon system or component overhaul, initiate an the appropriate historical record or bring the existing form up to date in accordance with the instructions outlined in this chapter. Enclose the historical records with the weapon system or component for forwarding, or attach it to the system or component.

4-9.2 If a system or component is received without the correct historical records, initiate a new form. Request the missing form in accordance with TO 00-20-1.

NOTE

If historical records are found separated from the weapon system or component to which they belong and the location of the system or component is unknown, mail the records immediately to the managing ALC IM. No historical records will be destroyed by any activity or person except when specifically authorized to do so by the ALC IM.

4-9.3 Retain completed historical records on file and forward with the weapon system documents when the aerospace vehicle is transferred or the component is removed and shipped to an overhaul facility. Dispose in accordance with AFI 37-138.

4-9.4 Review automated and manual historical records annually and document completion.

SIGNIFICANT HISTORICAL DATA			PAGE OF PAGE
1. MISSION DESIGN SERIES/TYPE, MODEL AND SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE

DATE A	REMARKS B	ORGANIZATION C

AFTO FORM 95, 19650201 *(EF-V4)* PREVIOUS EDITION WILL BE USED.

H9000636

Figure 4-1. AFTO FORM 95, Significant Historical Data

CHAPTER 5

TELEPHONE AND WIRE MAINTENANCE DOCUMENTS

5-1 PURPOSE.

The purpose of this section is to prescribe documentation requirements for managing maintenance of telephone and wire communications equipment.

5-2 SCOPE.

This section is applicable to all telephone and wire maintenance activities.

5-3 PRESCRIBED FORMS.

NOTE

Telephone and wire maintenance facilities with automated record systems, (i.e., TMS, CAIRS, TELPARS, or equivalent), are not required to use paper forms replaced by the automated system.

5-3.1 AFTO FORM 121, LINE RECORD.

5-3.2 AFTO FORM 224, CABLE RECORD.

5-3.3 AFTO FORM 233, CABLE TRANSFER WORK SHEET.

5-3.4 AFTO FORM 376, CIRCUIT LAYOUT RECORD/TROUBLE REPORT.

5-4 AFTO FORMS 224, 224A, AND 224B CABLE RECORD (FIGURES 5-1 AND 5-2).

AFTO FORM 224 series will be maintained for each cable plant and will contain both permanent and temporary entries. The only differences between the forms of the series are in the location of tabs and in the pair numbers printed on the forms. Entries are:

5-4.1 PERMANENT ENTRIES. The following are permanent entries:

5-4.1.1 PAIRS. Enter the cable count in the PAIRS block of the tabs.

5-4.1.2 CABLE. Enter the cable number at the ton of the form.

5-4.1.3 OFFICE. Enter the name or number or the office.

5-4.1.4 TER LOC. Enter the terminal locations. Terminals should be entered consecutively by cable pair counts beginning with the terminal with the lowest count which is normally most distant from the central office and continuing through the cable record to the terminal with the highest count which is normally nearest the central office.

5-4.1.5 TERM NO. Enter the terminal number.

5-4.1.6 TERMINAL LOCATION. Draw a solid line to show the terminal count distribution for each terminal. The solid lines from pair 1901 to pair 1950 show the terminal count distribution for terminals P01C132 and P01C133. When terminal information is continued to succeeding pages, draw arrows to indicate information for that terminal is covered on another form. For example, terminal PO1C133 extends beyond pair 1950.

5-4.1.7 PAIR COLUMN. Enter the appropriate hundred digits in the first and last cable pair number of the Page.

5-4.1.8 CABLE TRANSDUCER SYSTEMS. On cable pairs used in conjunction with a transducer, draw a horizontal line (in ink) from the pair number block through column 21. Document location of transducer in remarks column 22, 23 and 24.

5-4.2 TEMPORARY ENTRIES: The temporary entries will be printed in pencil and are as follows.

5-4.2.1 DATE VERIFIED. When a survey is completed, enter the date of the survey.

5-4.2.2 HELD ORDERS. Enter any service orders being held for facilities in the cable count covered by this page. The entries made should consist of the date of the work order, the order number, the terminal number and the class of service requested.

5-4.2.3 WIRED OUT OF LIMITS. Spaces are provided for recording those cases where, because of congested facilities, a station is wired out of limits and is being served from a terminal other than the one nearest the address. When the station is served either by a different cable or from a terminal that is covered on another form, it is necessary to make the same entries on the two forms concerned. Enter the cable number and pair number of the circuit as wired and enter the cable number, pair number and terminal number, as it should be wired.

5-4.2.4 CONNECTED TO. When cables are cross-connected, enter in the column the subsidiary cable number to which the cable has been cross-connected. In the PAIR column, enter the number of the pair in the subsidiary cable used to reach the subscriber.

5-4.2.5 SERVICE. Enter the class of service used. The type of service shall be shown by an entry in the SERVICE column in all cases using AFI 33-111 definitions. The following abbreviations are for general use, and other abbreviations are contained in AFD 33-122.
BAT - Battery feed
GEN - Generator feed
TRK - Trunk circuit
LD - Toll circuit
TWX - Teletypewriter

5-4.2.6 TELEPHONE NO. Enter the telephone number or circuit number on the line in the left TELEPHONE NO. Column opposite the pair of the terminal to be used. The right column will be used for the second number of two party services. If additional space is required for a cable pair entry, use the remarks column. For unusable cable pairs, enter the trouble in the left number column and the date declared bad in the right number column.

5-4.2.7 TERM NO/TERMINAL LOCATION. The terminal out of which the pair works will be indicated by placing an "X" in the terminal location column opposite the proper pair entry. The cross connect will be indicated by placing a slash in the terminal location opposite the proper pair entry. When a telephone number or circuit is disconnected, erase the telephone number or circuit number and all related information concerning it, including the "X" in the terminal location column.

5-4.2.8 Explanation of the sample entries under the heading TELEPHONE NO. in figure 3 showing class of service entries, are listed below.

5-4.3 Telephone number 2716 assigned on pair 01 with class A1A telephone service.

5-4.4 Telephone number 4112 assigned on pair 02 with class A1A telephone service is wired out of limits as indicated by the abbreviation "WOL" (wired out of limits) in the remarks column and by the entries in the WIRED OUT OF LIMITS block.

5-4.5 Telephone number 3275 assigned on pair 03 with class C1 telephone service.

5-4.6 Telephone numbers 8103 and 8303 are two-party stations with class B2 telephone service.

5-4.7 A generator is assigned on pair 05 as circuit number 2G5738.

5-4.8 A battery is assigned on pair 06 as circuit number 2G5738.

5-4.9 A trunk number 62GX1 is working on pair 07 out of terminal PO1C133.

5-4.10 Common Batt. 3029 is working through pair 08 and a slash (/) symbol is entered. Note that entries made on the AFTO FORM 224 for the 0807 cable, pair 17, will reflect that the pair is working out of that terminal.

5-4.11 Fire phone number 30 is on pair 09.

5-4.12 Teletypewriter circuit 8079 is on pair 10.

5-4.13 Speaker number 1 is working on tip, and number 2 is working on ring of pair 12.

5-4.13.1 Defective pairs are indicated by entering the nature of the trouble in the TELEPHONE NO. column or terminal location. A circle indicates a defective binding post which may be reparable and a dot indicate a defective binding post which is beyond repair. Examples of defective pair entries are described in the following paragraphs and shown in figure 3-4.

5-4.13.1.1 PAIR 21. Grounded pair on the tip side, T-GND. (R-GND is used for grounded on the ring side. GND is used for grounded on both sides.)

5-4.13.1.2 PAIR 22 and PAIR 28. Pair 22 is crossed with pair 28.

5-4.13.1.3 PAIR 23. Pair 23 is shorted.

5-4.13.1.4 PAIR 24. Universal bad pair.

5-4.13.1.5 PAIR 25. Open.

5-4.13.1.6 PAIR 26. Pair 26 is split with Pair 35.

5-4.13.1.7 PAIR 29. Open in the terminal indicated but it does not affect the pair in the other terminals. This entry may be made in the REMARKS column.

5-4.13.1.8 PAIR 32. This is a defective binding post which may be reparable.

5-4.13.1.9 PAIR 37. This defective binding post is beyond repair.

5-5 MAINTENANCE OF CABLE DOCUMENTS.

It is essential that the cable documents be kept current and that discrepancies be investigated and corrected without delay. This will prevent difficulties in fault finding and preclude incorrect repairs caused by erroneous records.

5-6 AFTO FORM 376, CIRCUIT LAYOUT RECORD/TROUBLE REPORT (FIGURES 5-3 AND 5-4).

This form will be used to record information on all special circuits such as fire reporting telephones, sirens telegraph or teletypewriter circuits or sprinklers. For some circuits it may be desirable to include a sketch to indicate its detailed layout. The front and back of the card have space for this purpose. Form entries are as follows:

5-6.1 CCT. Enter the circuit number or circuit designation in ink.

5-6.2 OPERATION. Enter the method of operation, such as 2-way ringdown, dial line and so forth.

5-6.3 CLASS. Enter the class of service or the type of circuit, such as TWX, MAG, CB. Classes of service and abbreviations are contained in AFI 33-111 and AFD 33-121.

5-6.4 CARD NO. When the record for a circuit requires the use of two or more forms, the forms comprising the record will be numbered in numerical sequence beginning with 1 and showing the total number of forms used, i.e., 1 of 4, 2 of 4.

5-6.5 USER. Enter the name of all users of the circuit.

5-6.6 LOCATION. Enter all building numbers where the circuit/equipment is located.

5-6.7 DATE IN EFFECT. Enter the date the circuit was placed in service.

5-6.8 AUTHORITY FOR INSTALLATION. Enter the service order number and/or other authority, which authorized this circuit, such as, Telecommunications Service Order (TSO).

5-6.9 CONTROL OFFICE. Enter the name and telephone number of the office having service responsibility for the entire circuit.

5-6.10 NOTES OR DRAWINGS. Enter any information that would be useful for establishing and maintaining the circuit.

5-6.11 FROM AND TO. Enter the points where the circuit is run. The first entries should be in consecutive order beginning with the first user station.

5-6.12 CABLE. Enter the designation of the cable or line over which the circuit is routed.

5-6.13 PAIR. Enter the cable pair used in completing the circuit for the cable designation shown in the preceding column.

5-6.14 Enter all reported troubles and repair action on the reverse side of the form. This data will include the date (day, month and year), time and location of the reported trouble and the name of the person who reported the trouble. It will also contain the date (day, month and year), time, and initials of the repairman when the required maintenance actions are completed.

5-7 AFTO FORM 233, CABLE TRANSFER WORK SHEET (FIGURE 5-5).

This form will be used to record information pertinent to cable and terminal transfer work. It may also be used to record the buildup/teardown of complex facilities. Entries are as follows:

5-7.1 Enter the cable number.

5-7.2 CROSS CONNECTION LOCATION. Enter the location of each cross-connect in sequence.

5-7.3 COUNT. Enter the cable pairs affected by the transfer.

5-7.4 WORK BY. Enter the initials of the person doing the work at the corresponding cross-connect location.

5-7.5 TEST OFFICE and TELEPHONE NO. Enter the name and telephone number of the control office that will perform the necessary test function.

5-7.6 CSA. Enter the communication service authorization number or other contract number.

5-7.7 WORK ORDER NO. Enter the work order identification number.

5-7.8 WRITTEN BY. Enter the initials and the telephone number of the person originating the cable transfer work sheet.

5-7.9 DATE. Enter the date the cable transfer work sheet is prepared.

5-7.10 PAGE NUMBER. Enter applicable page number in sequence.

5-7.11 COMPLETE (BEFORE-AFTER). Cross out either before or after and enter the appropriate date.

5-7.12 FLD START DATE. Enter the date the work will start.

5-7.13 FRAMEWORK. Indicate whether or not framework is required.

5-7.14 DESCRIPTION OF WORK. Enter an abbreviated description of the work to be performed.

5-7.15 ITEM NO. Enter the applicable item number in numerical sequence.

5-7.16 CLASS OF SVC. Enter the class of service or an abbreviation of the type of circuit.

5-7.17 TELEPHONE OR CIRCUIT NO. Enter applicable telephone or circuit number.

5-7.18 CIRCUIT DESCRIPTION. Enter a brief description of the circuit or other useful information.

5-7.19 SPECIAL EQUIPMENT. Enter the assignment of special equipment; such as long line repeaters, direct line units, or central office equipment

5-7.20 FROM.

5-7.20.1 CABLE REF. Enter the applicable cable reference.

5-7.20.2 PAIR. Enter cable pair number.

5-7.20.3 BP. Enter the binding post number, as applicable.

5-7.21 FROM-TO. Cross out the word that is not applicable and perform the entries red by paragraph 3-20.

5-7.22 TESTER INIT. Enter the initials of the person performing the test on the corresponding circuit.

5-7.23 REMARKS. Enter remarks as necessary. Example: Pair 301 to 500 clear capped.

5-7.24 SIGNATURE. Enter the signature of the person accomplishing the work after completion of the transfer.

5-7.25 DATE AND TIME. Enter the date and time the work was completed.

5-7.26 SIGNATURE OF INDIV WHO POSTED RCRD. Enter the signature of the person completing the posting to applicable records.

5-7.26.1 DATE POSTED. Enter the date the record is posted.

5-8 AFTO FORM 121, TELEPHONE EQUIPMENT LINE RECORD CARD (FIGURES 5-6 AND 5-7).

The purpose of the AFTO FORM 121 is to provide a historical record of each telephone line as identified by the telephone number. Use pencil only in Items 2 through 15. Entries are as follows:

5-8.1 KEY SYS NO. Enter the key system designator when the line terminates on a key system.

5-8.2 LINE NO. Enter the line number in ink or use a numbering machine (entry is required in one block only, depending on whether cards are filed vertically or horizontally).

5-8.3 BLOCK 1. TELEPHONE NUMBER. Enter the applicable telephone number in ink or use a numbering machine.

5-8.4 BLOCK 2. RING, NUMBER. Enter the ring code when applicable; e.g., 1, 2, etc. Enter the Hz when frequency selective ringing is used. Leave blank when no special ringing codes/features are used.

5-8.5 BLOCK 3. CLASS. Enter class of service.

5-8.6 BLOCK 4. DATE INSTALLED. Enter the date this number was placed in service for the current subscriber. When unknown, enter UNK.

5-8.7 BLOCK 5. PARTY NO. Enter a "0" if the telephone number is for a single party line. Enter the appropriate party number if it is a multi-party line, i.e., "1" for first party, "2" for second party.

5-8.8 BLOCK 6. USER. Enter the name/unit/office of the subscriber as applicable. This entry would normally be the name of the subscriber for class B quarters service, the name of the agency/ company for class B business service, or the unit/office designation for official service. Local conditions may render other entries more appropriate.

5-8.9 BLOCK 7. INST AUTH. Enter the service order number from the AF Form 3215, C4 Systems Requirement Document or locally generated requirement document.

5-8.10 BLOCK 8. ADDRESS. Enter the address where the telephone is located, when street addresses are used.

5-8.11 BLOCK 9. BUILDING NO. Enter the building number where the telephone is located.

5-8.12 BLOCK 10. ROOM NO. Enter the room number in which the telephone is located. If no room number is available, enter any data that will aid in finding the location of the telephone.

5-8.13 BLOCK 11. LOOP RES. Enter the loop resistance for special circuits or when it will aid in the maintenance of the line. Read the resistance from the vertical side of the main frame to the arrester, if installed, or to the first building terminal.

5-8.14 BLOCK 12. NUMBER. Enter the applicable cable and pair number(s) of all cable/pairs used in the line. Enter the terminal and pin number(s) when significant.

5-8.15 BLOCK 13. TELEPHONE. Enter in this block the type of telephone in use, such as WECO 500, WECO 554, etc. Also enter the number of extensions and their codes. When the telephone number is installed on a key system, entries in this block are optional for command or local use.

5-8.16 BLOCK 14. LINE RELAY. Enter the line equipment number or terminal number associated with the telephone number.

5-8.17 BLOCK 15. MISCELLANEOUS. Enter any useful data pertaining to the telephone e.g., in-dial only, external bells installed, and beehive lamp installed.

5-8.18 Enter all reported troubles and service actions on the reverse side of the form in ink. This will include the date, time, nature of reported trouble and the name of the person reporting the trouble. It will also include test results, trouble found, action taken, date, time, and name of the repairman when the required maintenance actions are complete. All service actions directed by AF FORM 3215 or locally

generated requirements document, are historical data and will be recorded on the reverse side of the AFTO FORM 121. This will include the date of the service order, person receiving the service order, the telephone work order number (TWO), work to be accomplished, work completed, date completed, and the name of the repair man who completed the work order.

5-9 COMBINATION ASSIGNMENT - REPAIR DESK.

This desk is listed in T/A 006 and should be used in telephone central offices for the filing of line record cards and trouble report envelopes containing circuit layout record cards.

5-10 AFTO FORM 781L, RECORD OF REMOVAL/INSTALLATION OF CONTROLLED CRYPTOGRAPHIC ITEMS (CCI) (FIGURE 3-22).

This Form provides control for serial number controlled CCI items. The Form is used to aid in serial number accountability.

5-10.1 Generally, ground communications-electronics mobile equipment scheduled for depot maintenance will have its CCI asset removed. In those instances where serial number controlled CCI assets remain with the equipment being sent to the depot the owning unit generates an AFTO FORM 781L to indicate loss of a serial number controlled CCI asset. One copy of the form is forwarded to base supply and one copy is included as part of the equipment's records. If a US citizen is not in control of the equipment during transit to the depot, the CCI asset must be removed. When equipment is scheduled to go to a depot that employs foreign nationals and a US citizen is not available to control the CCI asset then the CCI asset, will be removed prior to the equipment going to the depot.

5-10.2 Use the form to report serial number changes to base supply (Document Control). The form is used when CCI equipment is replaced and a serial number controlled asset from another organization is installed. Maintenance technicians performing replacement actions initiate the form. The following entries are required:

5-10.2.1 PART I, UNIT, BASE, AND EQUIPMENT INFORMATION: Complete all applicable items.

5-10.2.2 PART II, CCI INFORMATION:

5-10.2.2.1 SECTION A, REMOVED CCI INFORMATION: Complete all items with the exception of optional items "ACCOUNT/DOCUMENT NUMBER " and "CUSTODIAN." MAJCOMs may direct entries for these optional items.

5-10.2.2.2 SECTION B, INSTALLED CCI INFORMATION: Complete all items with the exception of optional item "ACCOUNT/DOCUMENT NUMBER." MAJCOMs may direct entries for this optional item.

5-10.2.3 PART III, GENERAL COMMENTS: MAJCOMs determine their requirements for entries in this section.

5-10.3 AFTO FORMS 122, 122A and 226 have been rescinded/deleted from the Air Force Inventory. Forms may be used until exhausted. Use of locally developed forms are authorized.

CABLE RECORD *(Left Tab 1-20)*

PAIRS	CABLE	DATE VERIFIED	OFFICE
CONN TO CA	COUNT	TER LOC	
CONN TO CA	COUNT	TER LOC	

HELD ORDERS

DATE	ORDER NO HELD	TERM	S	DATE	ORDER NO HELD	TERM	S

WIRED OUT OF LIMITS

PRESENT		SHOULD BE			PRESENT		SHOULD BE			PRESENT		SHOULD BE		
CA NO	PAIR	CA NO	1st PER	TER	CA NO	PAIR	CA NO	1st PER	TER	CA NO	PAIR	CA NO	1st PER	TER

TERMINAL LOCATION

TERM NO.

CONNECTED TO		GPN PAN BAY	SERVICE	PHONE	PHONE	PAIR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
CABLE	PAIR																														
						1																									
						2																									
						3																									
						4																									
						5																									
						6																									
						7																									
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						16																									
						17																									
						19																									
						19																									
						20																									
X	X	X	X	X	X	X	X	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

AFTO FORM 224, 19991019 *(EF-V1)* **PREVIOUS EDITION IS OBSOLETE**

H0000273

Figure 5-1. AFTO FORM 224, Cable Record

CABLE RECORD *(Right Tab 21-51 and 51-70)*

PAIRS	CABLE	DATE VERIFIED	OFFICE
CONN TO CA	COUNT	TER LOC	
CONN TO CA	COUNT	TER LOC	

HELD ORDERS

DATE	ORDER NO HELD	TERM	S	DATE	ORDER NO HELD	TERM	S

TERMINAL LOCATION

WIRED OUT OF LIMITS

PRESENT		SHOULD BE			PRESENT		SHOULD BE			PRESENT		SHOULD BE		
CA NO	PAIR	CA NO	1st PER	TER	CA NO	PAIR	CA NO	1st PER	TER	CA NO	PAIR	CA NO	1st PER	TER

TERM NO.

	CONNECTED TO		GPN PAN BAY	SERVICE	PHONE	PHONE	PAIR
	CABLE	PAIR					
							51
							52
							53
							54
							55
							56
							57
							58
							59
							60
							61
							22
							63
							64
							65
							66
							67
							68
							69
							70
X	X	X	X	X	X	X	X

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

AFTO FORM 224A, 19991019 (*EF-V1*)

H0000274

Figure 5-2. AFTO FORM 224A, Cable Record

X	X	X	X	X	X	X	X	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
							21																									
							22																									
							23																									
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							50																									
							51																									
								1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

AFTO 224A, 19991019 *(Reverse)*

H0000275

Figure 5-3. AFTO FORM 224A, Cable Record (Reverse)

CABLE RECORD *(Left Tab 71-00 and 01-20)*

PAIRS	CABLE	DATE VERIFIED	OFFICE
CONN TO CA	COUNT	TER LOC	
CONN TO CA	COUNT	TER LOC	

HELD ORDERS

DATE	ORDER NO HELD	TERM	S	DATE	ORDER NO HELD	TERM	S

WIRED OUT OF LIMITS

PRESENT		SHOULD BE			PRESENT		SHOULD BE			PRESENT		SHOULD BE		
CA NO	PAIR	CA NO	1st PER	TER	CA NO	PAIR	CA NO	1st PER	TER	CA NO	PAIR	CA NO	1st PER	TER

TERM NO.

	CONNECTED TO		GPN PAN BAY	SERVICE	PHONE	PHONE	PAIR
	CABLE	PAIR					
							01
							02
							03
							04
							05
							06
							07
							08
							09
							10
							11
							12
							13
							14
							15
							16
							17
							18
							19
							20
X	X	X	X	X	X	X	X

TERMINAL LOCATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

AFTO FORM 224B, 19991019 (*EF-V1*) **PREVIOUS EDITION IS OBSOLETE**

H0000276

Figure 5-4. AFTO FORM 224B, Cable Record

X	X	X	X	X	X	X	X	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
							71																									
							72																									
							73																									
							74																									
							75																									
							76																									
							77																									
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AFTO 224B, 19991019 *(Reverse)*

H0000277

Figure 5-5. AFTO FORM 224B, Cable Record (Reverse)

CIRCUIT LAYOUT RECORD/TROUBLE RECORD

CIRCUIT ID	OPERATION	CLASS	CARD NUMBER
USER		LOCATION	DATE IN EFFECT
AUTHORITY FOR INSTALLATION		CONTROL OFFICE	

CIRCUIT ROUTING

FROM	TO	CABLE	PAIR

TROUBLE REPORT

DATE/TIME REPORTED	LOCATION	TROUBLE	DATE/TIME CLEARED	INITIALS

NOTES OR DRAWINGS

AFTO FORM 376, 19960401 *(EF-V2)* **PREVIOUS EDITION IS OBSOLETE**

H0000278

Figure 5-6. AFTO FORM 376, Circuit Layout Record/Trouble Report

REF	CROSS CONNECTION LOCATION	COUNT	WORK BY

CABLE TRANSFER WORK SHEET | PAGE NUMBER

TEST OFFICE AND PHONE	CSA	WORK ORDER NO.	WRITTEN BY	DATE

COMPLETE	FLD START DATE	FRAMEWORK ☐ YES ☐ NO	DESCRIPTION OF WORK

ITEM NO	CLASS OF SVC	TELEPHONE OR CIRCUIT NO	CIRCUIT DESCRIPTION	SPECIAL EQUIPMENT	FROM CABLE REF		FROM-TO CABLE REF 1		FROM-TO CABLE REF		TO CABLE REF		TESTED BY	UPDATE FORMS/ RECORDS 2
					PAIR	BP	PAIR	BP	PAIR	BP	PAIR	BP	INITIALS	

SIGNATURE	DATE AND TIME	SIGNATURE OF INDIVIDUAL WHO POSTED RCRD	DATE

NOTE 1. STRIKE OUT WORD NOT APPLICABLE

NOTE 2. Update applicable Forms/Records (AFTO 122, 336, and/or 224/CSIRs). Data contained in AFTO 122, 336, and/or 224 may be maintained in an automated data base.

AFTO FORM 233, 19960401 *(EF-V2)*

H0000279

Figure 5-7. AFTO FORM 233, Cable Transfer Worksheet

LINE NO.

INSTRUCTIONS

Use pencil only. File take-outs in dead file; do not destroy.

KEY SYS NO. | LINE NO.

KEY SYS NO.

1. TELEPHONE NO.	2. RING NO.	3. CLASS	4. DATE INSTALLED	5. PARTY NO.
6. USER				7. INSTL AUTH

8. ADDRESS	9. BUILDING NO.	10. ROOM NO.	11. LOOP RES

12. NUMBER				13. TELEPHONE			
CABLE	PAIR	TERMNAL	PINS	MFR	CODE	NO. EXT	EXT CODE
				14. LINE RELAY			
				15. MISCELLANEOUS			

AFTO FORM 121, MAY 73 PREVIOUS EDITIONS ARE OBSOLETE TELEPHONE EQUIPMENT LINE RECORD

H0000280

Figure 5-8. AFTO FORM 121, Telephone Equipment Line Record Card

DATE RECEIVED	TROUBLE REPORTED	DATE O.K.
TIME RECEIVED	TEST RESULTS/TROUBLE FOUND	TIME O.K.
BY	WORK DONE	BY

AFTO FORM 121, MAY 73 *(Reverse)*

H0000281

Figure 5-9. AFTO FORM 121, Telephone Equipment Line Record Card (Reverse)

CHAPTER 6 HAS BEEN DELETED.

CHAPTER 7

INDUSTRIAL / SUPPORT EQUIPMENT RECORD

7-1 AFTO FORMS 244 AND 245, INDUSTRIAL / SUPPORT EQUIPMENT RECORD.

7-1.1 PURPOSE. The AFTO FORM 244 (figure 7-1) provides a means to document equipment delayed discrepancies and corrective actions, record service, periodic and special inspections, record inspection status, and historical data. The AFTO FORM 245 (figure 7-3) is published as a continuation form for PART V of the AFTO FORM 244. It provides users with a means to document discrepancies and corrective actions as a separate document or as an extension of the AFTO FORM 244 as described in paragraph 7-5. Use of the AFTO FORM 245 is optional as directed by the major command.

NOTE

The following information applies to all signature entries as outlined in this TO. If space is available, use of both initials or complete first name and middle initial will not be considered in error in lieu of using first initial and last name in designated blocks. Use of the employee number instead of signature or initials is an option of the major command.

7-2 APPLICATION.

The AFTO FORM 244 is optional for use at Headquarters Aerospace Audio Visual units when using AFTO FORM 95 for designated ground photo graphic equipment.

7-2.1 POWERED AND NON-POWERED AGE. A separate AFTO FORM 244 will be maintained for items having specific inspection requirements.

7-2.2 TRAINING EQUIPMENT. The AFTO FORM 244 will be maintained on each item of training equipment and each item of a mobile training set as designated by the major command.

7-2.3 TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE). The AFTO FORM 244 will be used on TMDE requiring scheduled inspections. Scheduled inspections do not include periodic calibration requirements. Use PMEL MIS scheduling hand receipt or AFTO 350 to process TMDE to PMEL for calibration or repair. Major commands may determine additional specific uses of AFTO 244 to address unique requirements related to TMDE.

7-2.4 VEHICULAR SE. The AFTO FORM 244 will be used on Vehicular SE. Major commands may exempt use of AFTO FORM 244 for selected items. The major command may delegate to the GP/ CC this exemption option.

7-2.5 TOOLS. The AFTO FORM 244 will be used on machine tools and industrial plant equipment but is not required on common and special tools.

7-3 AFTO FORM 244, PART I.

Provides a means to record the identity of the system or equipment for which the form is maintained.

7-3.1 BLOCK 1. Enter the name/nomenclature/or model of the system/equipment.

7-3.2 BLOCK 2. Enter the assigned AF registration number for registered SE or the serial number of other equipment. Leave blank or enter not applicable if unavailable.

7-3.3 BLOCK 3. Enter the locally assigned ID number, if assigned.

7-3.4 BLOCK 4. Enter the field number of registered/non-registered SE, if assigned. Leave blank or enter Not Applicable if not used.

7-3.5 BLOCK 5. Enter the Work Unit Code (WUC) if one is assigned to the item identified in Block 1.

7-3.6 BLOCK 6. Enter the designation of the organization/workcenter of the owning organization.

7-3.7 BLOCK 7. Enter the date the form was initiated in the FROM block. The date entered in the TO block is the date the form is closed out and a new form is initiated, or the equipment is turned in to supply or salvage.

7-4 AFTO FORM 244, PART II.

Provides a means to document required SE/trainer servicing inspections and prior to use inspections.

7-4.1 TIME/DATE COLUMN. Enter the time and date the service/prior to use inspection was accomplished. If the unit is equipped with a running time meter, the meter may be entered in place of the time of day. NOTE - For SE/trainers inspected at hourly intervals, enter the daily/accumulated time and date.

7-4.2 INSP INIT COLUMN. Enter the initials of the person completing the servicing inspection.

7-5 AFTO FORM 244, PART III.

Provides a means to document inspection due, e.g., P.E. special wheel bearing, etc., and number, if applicable.

7-5.1 INSPECTION REQUIREMENT COLUMN. Enter the type inspection due, e.g., P.E. special wheel bearing, etc., and number, if applicable.

7-5.2 INTERVAL COLUMN. Enter the scheduled inspection interval, e.g., hourly/monthly.

7-5.3 DATE DUE/DATE COMPLETED. Enter the next inspection hour/date in the next open date due block and enter the hour/date inspection completed in the date completed block.

7-6 AFTO FORM 244, PART IV.

Provides a means to document a quality control or supervisory review of the equipment forms. The specific time interval between supervisor reviews may be determined by the Major Command or delegated to the Deputy Command for Maintenance. Not to be used for documenting inspection of completed maintenance action.

7-6.1 EMPLOYEE NUMBER. Enter the employee number (or first name initial, last name and grade).

7-6.2 DATE. Enter the date the supervisor or quality review was accomplished. See chapter 1 for date entries.

7-7 AFTO FORM 244, PART V.

PART V and its optional continuation form (AFTO FORM 245) provide a means to document equipment discrepancies and corrective actions.

7-7.1 The following conditions will be recorded in this part of the form.

7-7.1.1 Delayed discrepancies on SE, training equipment, machine tools and industrial plant equipment, and includes corrosion discrepancies and malfunctions resulting from the accomplishment of functional and operational checklists or inspection workcards. Delayed discrepancies are malfunctions identified that cannot be corrected as part of the maintenance actions in progress and must be scheduled for follow-on maintenance actions.

7-7.1.2 Overdue scheduled inspection, including portions of inspections not accomplished during the scheduled inspection (i.e., workcard and/or workcard items not completed by the end of the due period).

7-7.1.3 Overdue time change, Master Configuration List (MCLs) and TCTOs.

7-7.1.4 Discrepancies discovered by the operator during operation of the system/equipment.

7-7.1.5 In shop environments where operators perform minor maintenance functions e.g., check/service oil, fuel, water, check output, etc. Only delayed discrepancies need to be recorded on the AFTO FORM 244.

7-7.2 PART V will be completed as follows:

7-7.2.1 TO: Enter technical order number or manufacturer's manual that covers the item identified in Block 1.

7-7.2.2 NSN: Enter the assigned national stock number for item identified in Block 1.

7-7.2.3 Blocks 11 and 12 are optional for major command use. Option selected must be approved for use by the major command. If approved, selected entry only will be used in the designated block throughout the

major command. If an entry is made in any of these blocks, the same entry must be continued on continuation AFTO FORM 245 (if it is elected to be used). If any of these blocks are not used, enter N/A in the block or leave blank.

7-7.2.4 DATE DISCOVERED COLUMN. Enter the date the discrepancy is discovered. The original date is brought forward to the new form when entries are carried forward from an old form. The Major Command has the option of permitting the individual entering the data to enter the duty phone number either in this column or the discrepancy column depending upon space available.

7-7.2.5 DISCOVERED BY COLUMN. The individual discovering the discrepancy will sign their first name initial, last name, grade or employee number. If this block is not used, enter N/A or leave blank.

7-7.2.6 SUP DOC NO COLUMN. Enter the base supply document number. When two or more supply document numbers re needed to adequately define base supply support for repairing a discrepancy, add all additional supply document numbers needed to correct the discrepancy after the statement of the discrepancy. If necessary, use of the next open DISCREPANCY block is authorized. If the next block is used all adjacent blocks will be lined through. As these requisitions from base supply are received by the requester, draw a single line through the document number to show its receipt. The use of the supply document number for machine tools, industrial plant equipment, powered and non-powered SE is not required unless directed by the Major Command. This block not required for units using CAMS unless directed by the major command.

7-7.2.7 SYMBOL COLUMN. Enter the applicable status symbol for the discrepancy. Discrepancies that are discovered on equipment that do not require a red symbol will be annotated "Info" only if an individual finds that it is important to pass on relevant information.

7-7.2.8 DISCREPANCY COLUMN. Enter the discrepancy or maintenance action required. This entry should reflect the same description that appears on the associated AFTO FORM 349. (This requirement does not apply to machine tools and industrial plant equipment.) Only one defect will be entered in each block for each job control or work order number; however, use as many blocks as necessary to completely describe a single discrepancy. See paragraph 3-7.b.(4) for instructions concerning entry of duty phone number. If "Info" is entered in Symbol column, enter information individual desires to pass on peculiar to that equipment.

7-7.2.9 JOB CON/WONO COLUMN. Enter the job control or work order number assigned to the discrepancy. Leave blank if "Info" is entered in symbol column and not entering a control number.

7-7.2.10 CORRECTIVE ACTION COLUMN. Enter the description of the corrective action taken or leave blank if necessary. If more space is needed to make this entry, use the next open block.

7-7.2.11 DATE CORRECTED COLUMN. Enter the date the discrepancy is corrected. See chapter 1, paragraph 1-6, Standard Entries.

7-7.2.12 CORRECTED BY COLUMN. The individual that corrects the discrepancy will sign their first name initial, last name, employee number in this block.

7-7.2.13 INSPECTED BY COLUMN. The individual authorized to clear red X symbols will enter their first initial, last name or employee number in this block and initial over the red X in the symbol column.

7-8 AFTO FORM 245.

This form provides a means to document equipment discrepancies and corrective actions and can be used as a continuation form to PART V of the AFTO FORM 244, or as a separate document without the AFTO FORM 244. This form will be completed using the same instructions as provided for PART V of the AFTO FORM 244. Use of the AFTO FORM 245 is a major command option.

7-9 FORMS MAINTENANCE AND DISPOSITION INSTRUCTIONS.

The AFTO FORMS 244 and 245 will be closed out and a new form initiated when additional recording space is required. The following procedures apply:

7-9.1 NEW FORM ENTRIES. Enter the current date in Block 7 and transcribe entries in Block 1 through 6 from the old form. Enter all carried forward inspections due in PART III from old form. Enter all carried forward discrepancies and information in PART V of the new form. When carrying the discovered by block forward, print the first initial, last name and rank of the individual that originally discovered the discrepancy, this will indicate the information has been carried forward.

7-9.2 CLOSE OUT OF AFTO FORMS 244 AND 245. When closing out the AFTO FORM 244, the current date will be entered in Block 7 (following the TO), and CF (carried forward) will be entered in the DATE COMPL block of PART III followed by your initials. In PART V of the AFTO FORMS 244 and 245 for each open discrepancy, enter in the corrective action block CF and your first name initial, last name and grade.

7-9.3 When the above actions have been completed, forward the old form to the responsible documentation activity for filing and disposition. (See paragraphs 1-5 and 2-22.2 of this TO and AFI 37-138.)

III. SCHEDULED INSPECTION

INSPECTION REQUIREMENT	INTERVAL	DATE DUE	DATE COMPL	DATE DUE	DATE COMPL

IV. SUPERVISORY REVIEW

EMPLOY NO	DATE	EMPLOY NO	DATE	EMPLOY NO	DATE

INDUSTRIAL/SUPPORT EQUIPMENT RECORD

I. ITEM IDENTIFICATION

1. NOMENCLATURE/MODEL	2. REGISTRATION/SERIAL NO.	
3. ID NO.	4. FIELD NO. *(If applicable)*	5. WORK UNIT CODE
6. ORGN WC ASSIGNED	7. PERIOD COVER TO	8.

II. NON-SCHEDULED INSPECTION

TIME	INSP INIT	TIME	INSP INIT	TIME	INSP INIT	TIME	INSP INIT	TIME	INSP INIT	TIME	INSP INIT
DATE		DATE		DATE		DATE		DATE		DATE	

AFTO FORM 244, 19831001 *(EF-V3)* **PREVIOUS EDITION IS OBSOLETE**

H0000252

Figure 7-1. AFTO FORM 244, Industrial/Support Equipment Record

V. **MAINTENANCE/DELAYED DISCREPANCY**

9. T.O.	10. NSN	11.	12.

DATE DISCOVERED	DISCOVERED BY / SUP DOC NO.	SYM-BOL	DISCREPANCY	JOB CON/ W.O. NO.	CORRECTIVE ACTION	DATE CORRECTED	CORRECTED BY / INSPECTED BY

AFTO FORM 244, 19831001 *(EF-V3) (Reverse)*

H0000253

Figure 7-2. AFTO FORM 244, Industrial/Support Equipment Record (Reverse)

INDUSTRIAL/SUPPORT EQUIPMENT RECORD
(Continuation Sheet)

V. MAINTENANCE/DELAYED DISCREPANCY

9. T.O.		10. NSN		11.		12.	
DATE DISCOVERED	DISCOVERED BY / SUP DOC NO.	SYM-BOL	DISCREPANCY	JOB CON/ W.O. NO.	CORRECTIVE ACTION	DATE CORRECTED	CORRECTED BY / INSPECTED BY

AFTO FORM 245, 19831001 *(EF-V2)* **PREVIOUS EDITION IS OBSOLETE, REPLACES AFTO FORM 483 WHICH IS OBSOLETE**

H0000254

Figure 7-3. AFTO FORM 245, Industrial/Support Equipment Record (Continuation Sheet)

INDUSTRIAL/SUPPORT EQUIPMENT RECORD
(Continuation Sheet)

V. MAINTENANCE/DELAYED DISCREPANCY

9. T.O.		10. NSN		11.		12.	
DATE DISCOVERED	DISCOVERED BY / SUP DOC NO.	SYM-BOL	DISCREPANCY	JOB CON/ W.O. NO.	CORRECTIVE ACTION	DATE CORRECTED	CORRECTED BY / INSPECTED BY

AFTO FORM 245, 19831001 *(EF-V2) (Reverse)*

H0000255

Figure 7-4. AFTO FORM 245, Industrial/Support Equipment Record (Continuation Sheet) (Reverse)